

Hi All,

Sadly, the international year of soils has ended. BUT, the International Decade of Soils has just begun!



Cheers

Brian

Soil and Pulses: Symbiosis for Life

By [Valentina Gasbarri](#) Reprint |  Print | [Send by email](#)



Credit: Manipadma Jena/IPS

ROME, 21 April 2016 (IPS) - The Food and Agriculture Organization of the United Nations (FAO) in partnership with Biodiversity International and the Permanent Mission of Italy to the UN (Rome based UN agencies) jointly organized a seminar on “Soils and pulses: symbiosis for life”, providing a platform to stakeholders, including governments, research organizations, civil society and the private sector, to deliberate increased pulses production and consumption and its relation to higher productivity and fertility of soils. 2016 is the International Year of Pulses as declared by the United General Assembly. <http://www.ipsnews.net/2016/04/soil-and-pulses-symbiosis-for-life/>

Livestock manure provides mineral fertilizers and soil conditioners

18 April 2016



With the BioEcoSim process, livestock manure can be converted into valuable phosphorus fertilizers (rear), nitrogen fertilizers (right) and soil conditioners (front).

In regions with intensive livestock production, manure management is a problem.

Nevertheless manure can become a valuable resource when its components are recovered as specific fertilizers and soil conditioners. For a year now a pilot plant for the processing of livestock manure – constructed under the leadership of Fraunhofer IGB – has been producing mineral nitrogen and phosphate fertilizers as well as organic soil conditioners. On June 14, 2016 the partners of the EU project BioEcoSIM will present their results and give a live demonstration of the plant.

Read more at: <http://phys.org/news/2016-04-livestock-manure-mineral-fertilizers-soil.html#jCp>

Earth's soils could play key role in locking away greenhouse gases

6 April 2016



Credit: Mick Lissone/public domain

The world's soils could store an extra 8 billion tonnes of greenhouse gases, helping to limit the impacts of climate change, research suggests.

<http://phys.org/news/2016-04-earth-soils-key-role-greenhouse.html>

Soil Management Can Save Earth From the Dangers of Climate Change



A change in agricultural practices can bring about effective soil management that can save the earth from the dangerous effects of climate change like overheating.

(Photo : Wobogre/Pixabay)

An alteration in the way humans farm and manage soils can save the earth from overheating, according to a new report. As per researchers, soil plays an important role in storing carbon, and improving the management of soil can make it play a bigger role in avoiding drastic climate change.

<http://www.scienceworldreport.com/articles/38423/20160419/soil-management-save-earth-dangerous-climate-change.htm>

Clear-cutting destabilizes carbon in forest soils, study finds



Patches of clear-cut mountain (stock image). Clear-cutting loosens up carbon stored in forest soils, increasing the chances it will return to the atmosphere as carbon dioxide and contribute to climate change, a Dartmouth College study shows.

Credit: © spiritofamerica / Fotolia

Clear-cutting loosens up carbon stored in forest soils, increasing the chances it will return to the atmosphere as carbon dioxide and contribute to climate change, a Dartmouth College study shows.

The findings appear in the journal *Soil Science*.

Journal Reference:

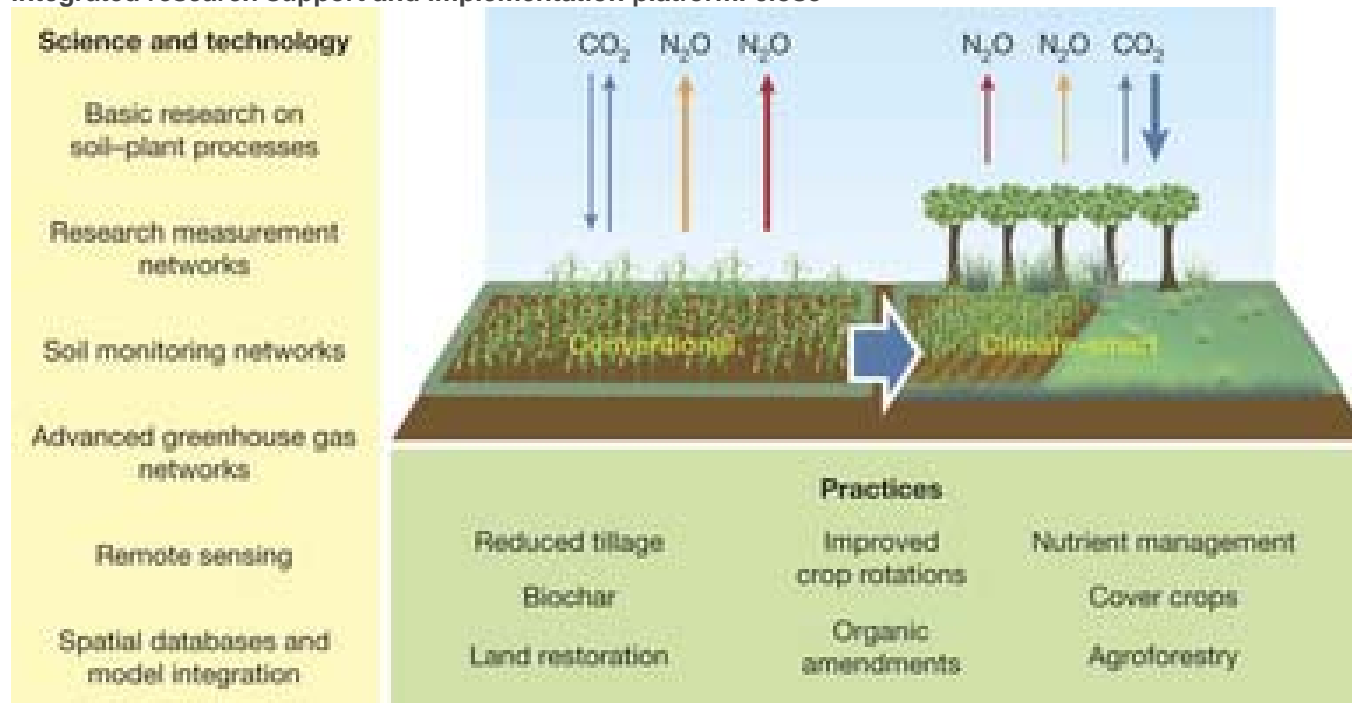
1. Lacroix, Emily M.; Petrenko, Chelsea L.; Friedland, Andrew J. **Evidence for Losses From Strongly Bound SOM Pools After Clear Cutting in a Northern Hardwood Forest.** *Soil Science*, April 2016 DOI: [10.1097/SS.000000000000147](https://doi.org/10.1097/SS.000000000000147)

<https://www.sciencedaily.com/releases/2016/04/160415125925.htm>

Climate-smart soils

Soils are integral to the function of all terrestrial ecosystems and to food and fibre production. An overlooked aspect of soils is their potential to mitigate greenhouse gas emissions. Although proven practices exist, the implementation of soil-based greenhouse gas mitigation activities are at an early stage and accurately quantifying emissions and reductions remains a substantial challenge. Emerging research and information technology developments provide the potential for a broader inclusion of soils in greenhouse gas policies. Here we highlight 'state of the art' soil greenhouse gas research, summarize mitigation practices and potentials, identify gaps in data and understanding and suggest ways to close such gaps through new research, technology and collaboration.

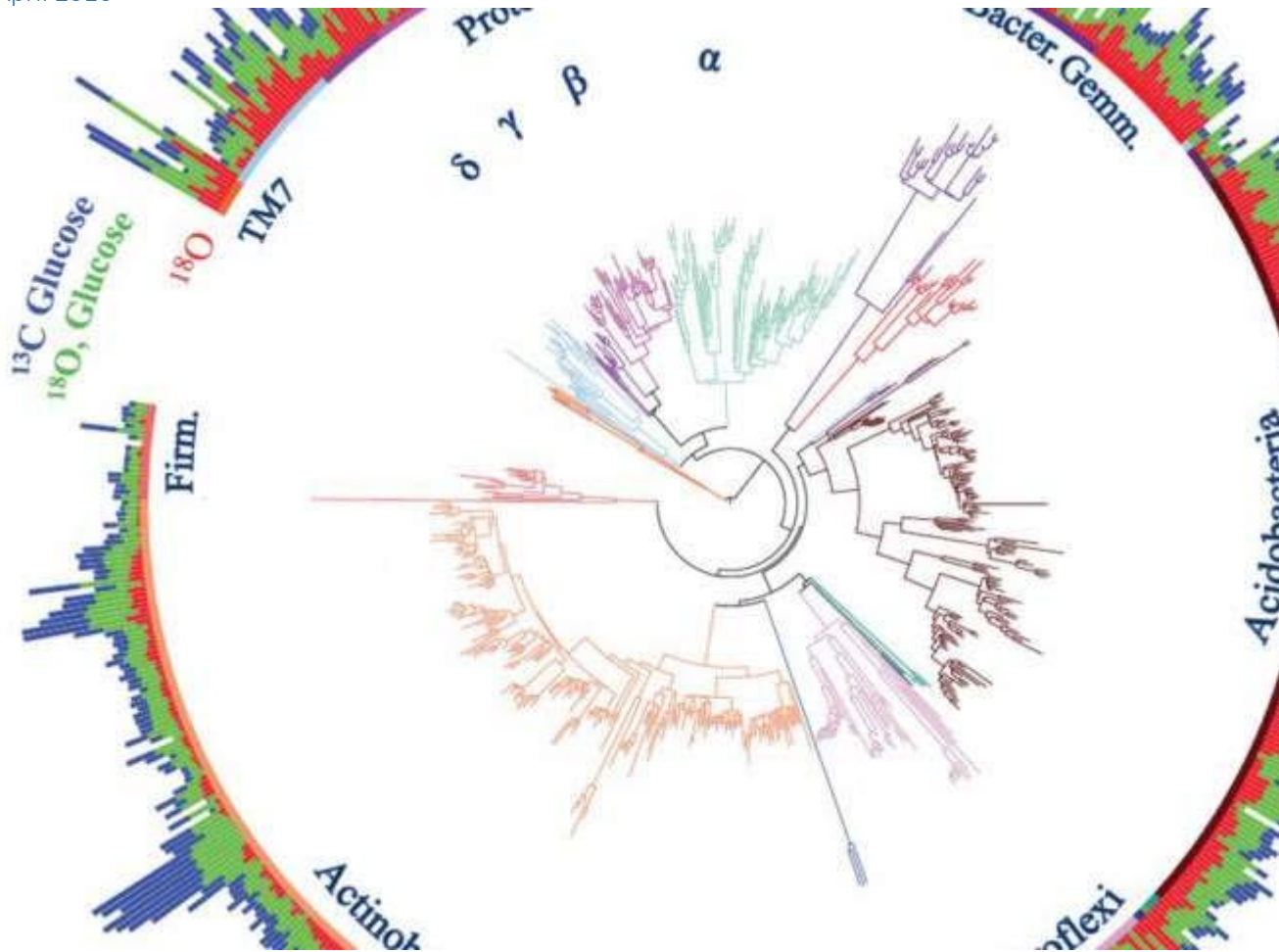
Figure 3: Expanding the role of agricultural soil GHG mitigation will require an integrated research support and implementation platform. close



<http://www.nature.com/nature/journal/v532/n7597/full/nature17174.html>

New tool reveals role of ancestry in soil communities of bacteria

15 April 2016



Clustering in the use of carbon and oxygen shows an influence of evolutionary history on bacterial activity in soil. Credit: Morrissey, et al. 2016.

The link between lineage and behavior has inspired research across the spectrum of life. For plants and animals, genetically close cousins tend to act in similar ways. Finches, for example, eat seeds, while swallows eat insects. For bacteria, however, the question is up for debate.

Read more at: <http://phys.org/news/2016-04-tool-reveals-role-ancestry-soil.html#jCp>

CSIRO changes risk losing millions of dollars in international grants, leading scientists say

Lateline

By political correspondent David Lipson

Updated 21 Apr 2016, 10:15am Thu 21 Apr 2016, 10:15am



Lateline has obtained unofficial minutes of a CSIRO staff meeting last month, where one researcher directly raised the United Nations Development Program's concerns about funding the organisation in future.

"The UN told him that in their view, the new CEO was not reliable," retired CSIRO fellow Dr Nick Abel said. <http://www.abc.net.au/news/2016-04-20/csiro-changes-risk-losing-millions-in-grants-scientists-say/7343750?section=environment>

Landslide risk remains high a year after magnitude-7.8 Nepal earthquake

26 April 2016 by Jim Erickson



Marin Clark assessing boulders deposited during a monsoon-triggered debris flow near Timbu, Nepal. Credit: Dimitrios Zekkos

With the monsoon fast approaching, the landslide risk in Nepal remains high a year after a magnitude-7.8 earthquake that killed more than 8,000 people, according to a University of Michigan-led research team.

<http://phys.org/news/2016-04-landslide-high-year-magnitude-nepal.html>

International Decade of Soils



IUSS proclaims the International Decade of Soils 2015-2024

In the *Vienna Soil Declaration* of Dec. 7, 2015, the IUSS has identified the key roles played by soils in addressing the major resource, environmental, health and social problems which humanity is currently facing. Given this situation, the IUSS believes that it is incumbent on IUSS members to not only maintain the level of activity generated in IYS 2015 but to increase the momentum and the extent of our contributions on these issues as we move towards the Centenary of the IUSS formation in 2024. In the course of the highly successful conference ‘Celebration of International Year of Soils 2015 – Achievements and Future Challenges’ the International Decade of Soils 2015-2024 was proclaimed by Rainer Horn, IUSS President.

http://www.iuss.org/index.php?article_id=588

Soils: poaching

What is poaching?

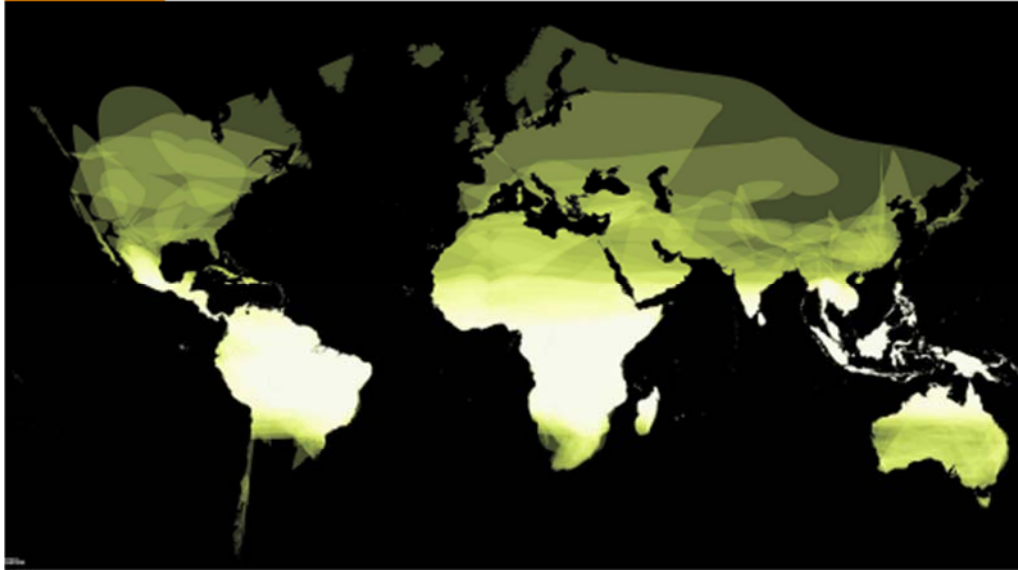
Poaching is the damage caused to turf or sward by the feet of livestock. Hooves cause compaction of the soil surface, leaving depressions which can be 10cm to 12cm deep. This can form an almost continuous layer of grey anaerobic soil, where natural activity, carried out by soil micro-organisms, is low.



<http://www.fwi.co.uk/academy/lesson/soils-poaching>

Potential of Satellite Remote Sensing to Monitor Species Diversity

4TH APRIL 2016



The importance of measuring species diversity as an indicator of ecosystem health has been long recognized and it seems that satellite remote sensing (SRS) has proven to be one of the most cost-effective approaches to identify biodiversity hotspots and predict changes in species composition. What is the real potential of SRS and what are the pitfalls that need to be avoided to achieve the full potential of this method is the topic of a new research, published in the journal *Remote Sensing in Ecology and Conservation*.

<http://sensorsandsystems.com/potential-of-satellite-remote-sensing-to-monitor-species-diversity/>

Climate Change May Be Curbed By Farmers By Locking Carbon Away In Soil

We may be able to use our planet's soil as part of the climate change solution. By storing carbon away in our soils, we may be able to take steps to help mitigate climate change.

By [Catherine Griffin](#) | Apr 19, 2016 11:59 AM EDT



We may be able to use our planet's soil as part of the climate change solution. By storing carbon away in our soils, we may be able to take steps to help mitigate climate change. (Photo : Wikimedia Commons)

Earth's soil may be part of the climate change solution. Scientists found that dirt could be a huge part of storing carbon in order to mitigate climate change.

Currently, governments are looking to soil as part of the solution to curbing climate change. Widespread changes to agricultural practices could, in theory, help lock away carbon emissions. However, it's still not certain whether agricultural practices will change in order to help with this trend.

Soil is an effective carbon sink <http://www.hngn.com/articles/197382/20160419/climate-change-curbed-farmers-locking-carbon-away-soil.htm>

Nanoparticles present sustainable way to grow food crops

29 April 2016 by Beth Miller



Researchers at Washington University in St. Louis hope that nanoparticle technology can help reduce the need for fertilizer, creating a more sustainable way to grow crops such as mung beans.

Scientists are working diligently to prepare for the expected increase in global population—and therefore an increased need for food production—in the coming decades. A team of engineers at Washington University in St. Louis has found a sustainable way to boost the growth of a protein-rich bean by improving the way it absorbs much-needed nutrients.

Read more at: <http://phys.org/news/2016-04-nanoparticles-sustainable-food-crops.html#jCp>

Scientists just grew vegetables in ‘Martian’ soil — but there’s a catch

By [Rachel Feltman](#)
[Speaking of Science](#)



Mars soil simulant with rye two and a half weeks after sowing and over one week at the Dutch Design Week 2015

In "[The Martian](#)," astronaut and botanist Mark Watney has to figure out how to make potatoes grow in the arid, alien soil of Mars. Real-life scientists are trying to do the same thing on Earth — even though no earthling has ever had access to Martian dirt.

<https://www.washingtonpost.com/news/speaking-of-science/wp/2016/03/09/scientists-just-grew-vegetables-in-martian-soil-but-theres-a-catch/>

Growers make the most of fertile soils to achieve bumper yields

[David Jones](#)

Monday 25 April 2016 8:23

Some of the most fertile soils in Britain were under the sea 350 years ago, but now see many of the country's highest wheat yields. Farmers Weekly visits two farmers close to the sea to find out how they are pushing yields higher. David Hoyles Mark Means Wheat close to the Wash races away to top yields David Hoyles looks for a

thick wheat crop coming out of the winter. <http://www.fwi.co.uk/arable/growers-make-the-most-of-fertile-soils-to-achieve-bumper-yields.htm>

<http://www.hnqn.com/articles/197382/20160419/climate-change-curbed-farmers-locking-carbon-away-soil.htm>

Bacteria beneficial to plants have spread across California

27 April 2016



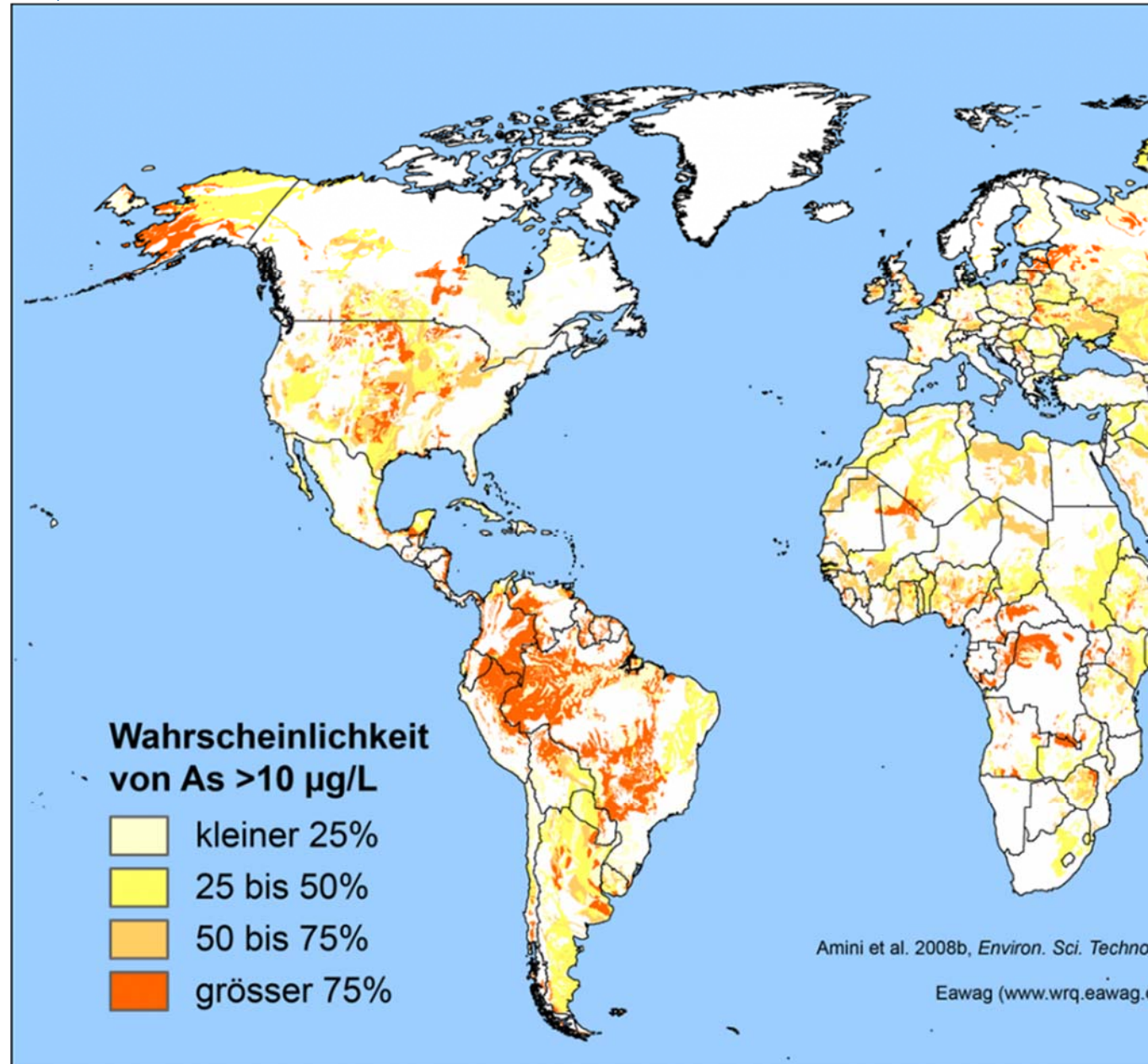
Acmispon, seen here, is the host plant the research team sampled (the bacteria are sampled from the plant roots). Credit: Sachs lab, UC Riverside.

Scientists at the University of California, Riverside have discovered that a strain of beneficial nitrogen-fixing bacteria has spread across California, demonstrating that beneficial bacteria can share some of the same features that are characteristic of pathogens.

<http://phys.org/news/2016-04-bacteria-beneficial-california.html>

A milestone in the battle against arsenic- and fluoride-contaminated drinking water

28 April 2016



Modeled global probability of geogenic arsenic contamination in groundwater for reducing and for high-pH/oxidizing aquifer conditions.

Over 300 million people worldwide use groundwater contaminated with arsenic or fluoride as a source of drinking water. The Swiss Federal Institute of Aquatic Science and Technology (Eawag) has developed a method whereby the risk of contamination in a given area can be estimated using geological, topographical and other environmental data without having to test samples from every single groundwater resource. The research group's knowledge is now

being made available free of charge on an interactive Groundwater Assessment Platform (GAP). gapmaps.org enables authorities, NGOs and other professionals to upload their own data and generate hazard maps for their areas of interest.

<http://phys.org/news/2016-04-milestone-arsenic-fluoride-contaminated.html>

Earthworms are a part of rich, organic soils

By [Johh Zvirovski](#) on 23 April 2016 at 7:42 a.m.



It is amazing what a difference a week can make in our environment of spring. As soon as the rain begins to fall, things begin to green up quickly. Tulips, daffodils, crocus, hyacinth, squill, along with numerous other plants begin to set buds from their lush vegetation. The sight of green is like an aphrodisiac to the gardener's senses and the garden comes back to life. <http://www.jamestownsun.com/life/garden/4016441-earthworms-are-part-rich-organic-soils>

Monthly R-factor and Conversion factors for different time resolutions

As a follow up and an advancement of the recently published **Rainfall Erosivity Database at European Scale (REDES)** and the respective mean annual R-factor map, the monthly aspect of rainfall erosivity has been added to REDES. Rainfall erosivity is crucial to be considered at a monthly resolution, for the optimization of land management (seasonal variation of vegetation cover and agricultural support practices) as well as natural hazard protection (landslides and flood prediction). We expanded REDES by 140 rainfall stations, thus covering areas where monthly R-

factor values were missing (Slovakia, Poland) or former data density was not satisfactory (Austria, France, and Spain). REDES includes 1675 stations with R-factor values in European Union & Switzerland. The different time resolutions (from 5 to 60 min) of high temporal data require a conversion of monthly R-factor based on a pool of stations with available data at all time resolutions. The coefficients of different resolutions for monthly rainfall erosivity allow normalizing the monthly R-factor values to a common 30-min resolution for all the REDES stations.

Calibration factors for different temporal resolutions (Annual basis)

The term ‘calibration factor’ is used below to represent this conversion between the R-factor at different resolutions and the R-factor at 30-min. The different time resolutions (from 5 to 60 min) of high temporal data require a conversion of monthly R-factor based on a pool of stations with available data at all time resolutions.

Resolution of source data	Target resolution	Conversion factor
1-min	30-min	0.7496
5-min	30-min	0.7984
10-min	30-min	0.8205
15-min	30-min	0.8716
60-min	30-min	1.5597

<http://esdac.jrc.ec.europa.eu/themes/monthly-r-factor-and-conversion-factors-different-time-resolutions>

Landscapers benefit from organic land care extension program

5 April 2016



Land care practitioners visit organic turf sites in New Jersey as part of the Rutgers Organic Land Care Certificate Program. Participants reported that the program helped them become more effective at organic practices. Credit: Michele Bakacs.

A new study shows the impact of an organic lawn care training program designed for landscapers, including insights into landscapers' attitudes, lessons learned, and challenges. The results also suggest ways in which extension professionals can bring value to organic land management programs. The article, which appeared in the February 2016 issue of *HortTechnology*, assessed the impact of Rutgers University's Organic Land Care Certificate Program and includes recommendations for similar programs.

Read more at: <http://phys.org/news/2016-04-landscapers-benefit-extension.html#jCp>

Contamination in North Dakota linked to fracking spills

27 April 2016



A stream contaminated by an accidental spill. Credit: Avner Vengosh

Accidental wastewater spills from unconventional oil production in North Dakota have caused widespread water and soil contamination, a new Duke University study finds.

<http://phys.org/news/2016-04-contamination-north-dakota-linked-fracking.html>

Scientists inch closer to predicting phreatic volcanic eruptions

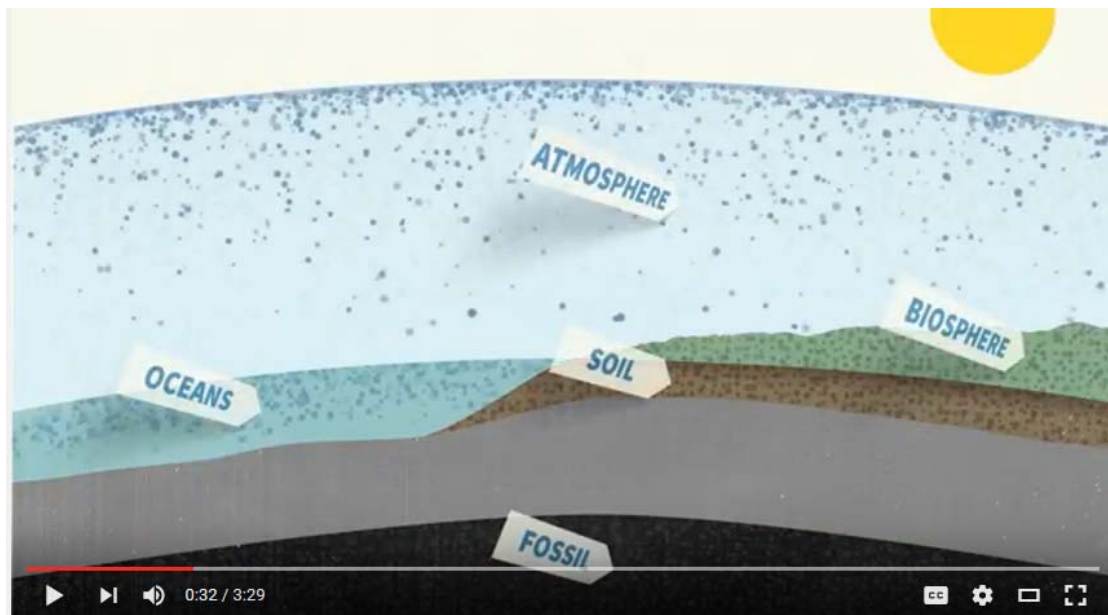
25 April 2016 by Steve Carr



UNM Department of Planetary Sciences Professor Tobias Fischer (in orange) at Poás volcano in Costa Rica.

Throughout the centuries, volcanic eruptions have claimed hundreds of thousands of lives due in part to the lack of accurate signs indicating imminent eruptions. One type of a volcanic eruption, a phreatic eruption, which involves external water, is particularly energetic causing a disproportionate number of fatalities. Phreatic eruptions are extremely difficult to forecast, often occurring with little or no geophysical precursors.

Read more at: <http://phys.org/news/2016-04-scientists-inch-closer-phreatic-volcanic.html#iCp>



The Soil Story narrated by Larry Kopald

<https://www.youtube.com/watch?v=08TI1RKj54g&feature=share>

Volcanoes tied to shifts in Earth's climate over millions of years

21 April 2016



Volcano Licancabur, an active volcano in the Andean continental volcanic arc on the Chile-Bolivia border, looms above flamingos in a nearby lake. Credit: Brian Horton

A new study in the April 22 edition of *Science* reveals that volcanic activity associated with the plate-tectonic movement of continents may be responsible for climatic shifts from hot to cold over tens and hundreds of millions of years throughout much of Earth's history.

<http://phys.org/news/2016-04-volcanoes-tied-shifts-earth-climate.html>



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


"I'm not saying it's totally impossible to frame climate change across party lines but it might take more time and resource than advocates imagine, and a much greater degree of care," says Jack Zhou. "Communication that doesn't work perfectly—if such a thing even exists—could polarize these audiences further from where you want them to be." (Credit: iStockphoto)

CLIMATE ACTION DOESN'T HINGE ON ONE GREAT MESSAGE

DUKE UNIVERSITY → Original Study

Posted by [Tim Lucas-Duke](#) on April 29, 2016

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Political advocates supporting action on climate change have long sought just the right message for swaying skeptics—but a new study suggests it's not that simple.

"Because climate change has become polarized along party lines, it's no longer just an issue of finding 'the right framing' to convey relevant facts," says study author Jack Zhou, who will graduate with a PhD in environmental politics next month from Duke University's Nicholas School of the Environment. "It has become a matter of political identity, particularly the political party we feel closest to."

<http://www.futurity.org/climate-message-1151172-2/>

The geology of wine

27 April 2016



Soil nutrient status as measured by pH is reflected in acidity and related taste of Pinot Noir wines in Oregon's Willamette Valley. These are Pinot Noir vines on Jory Series soils, which are developed on a middle Miocene intrabasaltic Oxisol in the Bernau Block of Willamette Valley Vineyards, near Salem. Credit: Matt Boyington

Every day, all around the world, millions of people contemplate a very simple question with a very complex answer: which wine? In this month's issue of GSA Today, Gregory Retallack (University of Oregon) and Scott Burns (Portland State University) examine the link between the taste of wine and soil properties.

<http://phys.org/news/2016-04-geology-wine.html>





Regenerating degraded dirt

It's hard to find a bare spot on the more than 800 acres farmed by Cory Atkins of Seaford, Del. Even in the dead of winter, a carpet of ankle-high ryegrass blankets the soil where he plans to grow soybeans in the spring. In other fields, wheat and barley sown last fall poke through the dirt next to remnants of sunflowers, clover, and radishes. Atkins is part of a small but growing group of farmers and agriculture specialists working to improve the health of degraded soils by increasing soil organic matter. As well as planting cover crops, these conservation-minded growers are adopting no-till practices that don't disturb the soil. Read the full article.

American Farm Bureau Federation joins initiative to give farmers control of data they collect

The American Farm Bureau Federation and a host of other agricultural groups today revealed a ground-breaking data repository that supporters say will give farmers ultimate control over the ever-increasing business data gathered and transmitted by high-tech farm machinery. Tractors, tilling equipment, planters, sprayers, harvesters and agricultural drones are increasingly connected to the Internet. Even so, farmers don't always have the ability to precisely control where that data goes, nor transfer it from one data processor to another. The newly formed Agricultural Data Coalition will empower farmers to better control, manage and maximize the value of the data they collect every day in the fields. Read the full article.

Science is a major plank in China's new spending plan

China will invest heavily in S&T over the next 5 years and cut red tape hampering science spending with the hope that innovation will help the country weather its economic slowdown. In a speech to open the National People's Congress on 5 March, Chinese Premier Li Keqiang—the country's top economic official—gave a broad-brush overview of the central government's draft plan for economic development during the 13th 5-year plan, which runs from 2016 to 2020. Major elements include boosting science spending, which will rise 9.1% this year to 271 billion yuans (\$41 billion), reducing bureaucratic barriers for scientists, and improving environmental protection while curbing carbon emissions and other pollutants. Read the full article.

The Middle East just suffered its worst drought in 900 years

A NASA study has found that a drought that affected the Middle East over the past decade was perhaps the worst in the region's history for nearly a millennium. The scientists examined the tree-ring record of the Eastern Mediterranean to determine when water was most scarce. Scientists

suggested then that the collapse of agriculture in the country was in part to blame for the magnitude of the event—yet another sign of the ways in which human activity can both affect nature and get subdued by it. Read the full article.

South Africa to ease some GM crop rules to avert food crisis

South Africa will relax some of its tough rules on GM crops so it can ramp up maize imports from the US and Mexico to avert a potential food crisis amid a severe drought. Almost 90% of its maize is genetically modified and the country bans commodities with strains not approved by the government and does not allow imports to be stored, stipulating they must be transported immediately from ports to mills. The government, however, has not said when the rule changes would come into effect or whether they would be permanent. Read the full article.

This page of the ASA-CSSA-SSSA web site will highlight current news items relevant to Science Policy. It is not an endorsement of any position.

<http://links.sciencesocieties.org/m/1/17115934/b6916-5bdedab8-f0c1-4f27-9f2c-8cd239dd48e2/15/119/936a8605-a94e-4096-bae1-4f42474ee055>



DustWatch Re

Febru

Dust activity	Halved from last month; similar to last year
Wind strength	Similar to last month; windiest February since 20
Groundcover	Reducing across the board; TERRA satellite failin
Rainfall	Driest February since 1978 in NSW
Land management	Paddock preparation continues

Dust activity

February 2016 was one of the hottest and driest February on the Bureau of Meteorology re Despite this, dust activity has reduced from January 2016 (178h) to February 2016 (88h). T is similar to the reduction in 2015 (223h in January; 88h in February).

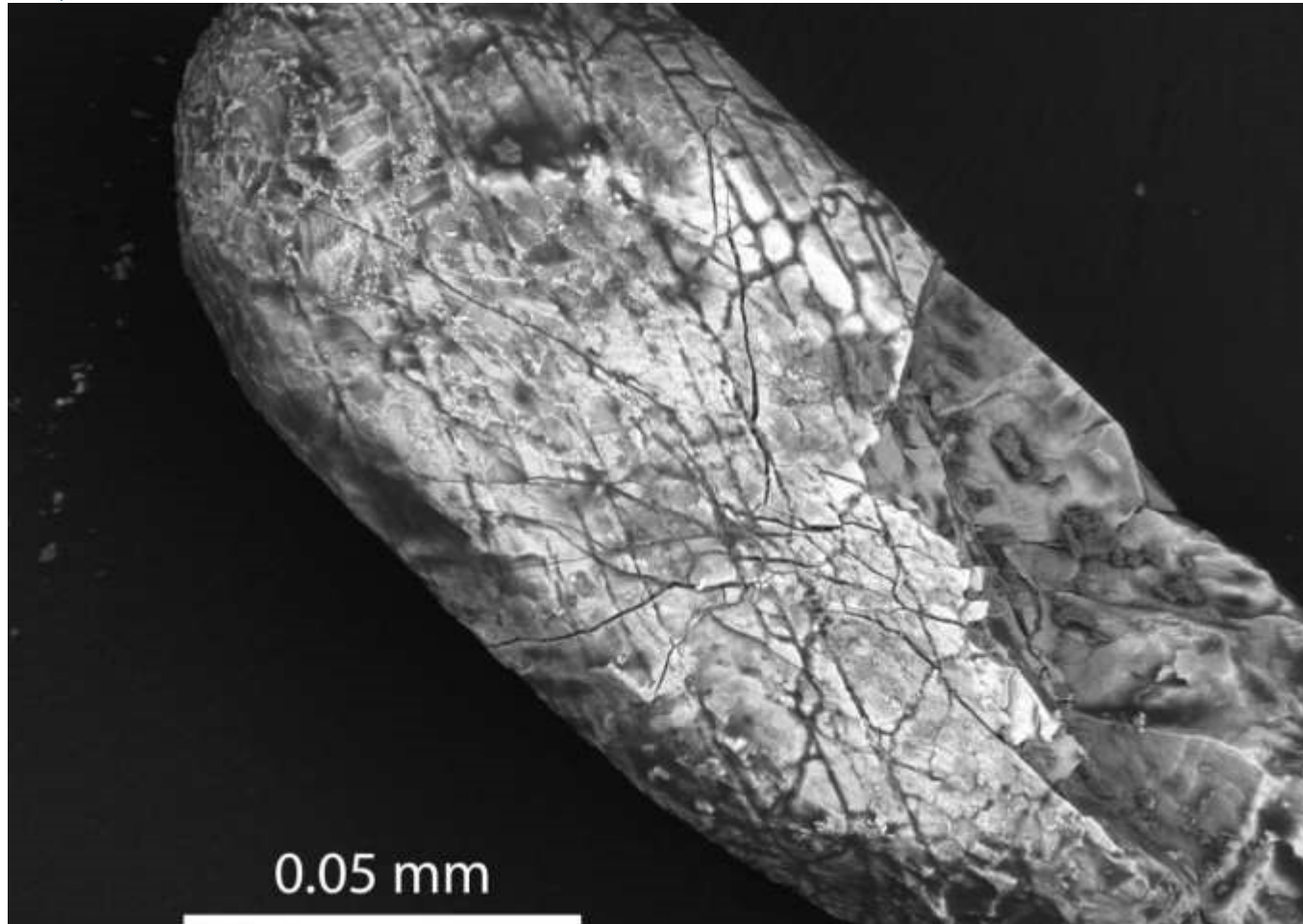
The majority of dust activity in February 2016 was in the south western corner of New South across the border in the North Central region of Victoria and the South Australian Murray D region (red circle in Figure 1).

No dust storms were reported in the media or on social media as the majority of events occ sun set.

<http://www.environment.nsw.gov.au/resources/dustwatch/160224DWNL.pdf>

Scientists reveal likely origin of Earth's oldest crystals (Update)

28 April 2016



Scanning electron microscope picture of a zircon crystal from the Sudbury crater.
Credit: Gavin Kenny, Trinity College Dublin.

New research suggests that the very oldest pieces of rock on Earth—zircon crystals—are likely to have formed in the craters left by violent asteroid impacts that peppered our nascent planet, rather than via plate tectonics as was previously believed.

<http://phys.org/news/2016-04-scientists-reveal-earth-oldest-crystals.html>

Water storage made prehistoric settlement expansion possible in Amazonia

28 April 2016



Contemporary water storage. Location: Bom Futuro. Credit: Per Stenborg

The pre-Columbian settlements in Amazonia were not limited to the vicinities of rivers and lakes. One example of this can be found in the Santarém region in Brazilian Amazonia, where most archaeological sites are situated in an upland area and are the result of an expansion of settlements in the last few centuries before the arrival of Europeans. This is concluded by a research team consisting of archaeologists from the University of Gothenburg and Brazilian colleagues.

<http://phys.org/news/2016-04-storage-prehistoric-settlement-expansion-amazonia.html>



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"These findings not only solve an atmospheric mystery—where that extra ethane was coming from—they also help us understand how regional activities sometimes have global impacts," says Colm Sweeney. "We did not expect a single oil field to affect global levels of this gas." (Credit: [Lindsay G/Flickr](#))

JUST 1 OIL FIELD IS LEAKING 2% OF EARTH'S ETHANE

UNIVERSITY OF MICHIGAN → [Original Study](#)

Posted by [Nicole Casal Moore-Michigan](#) on April 27, 2016

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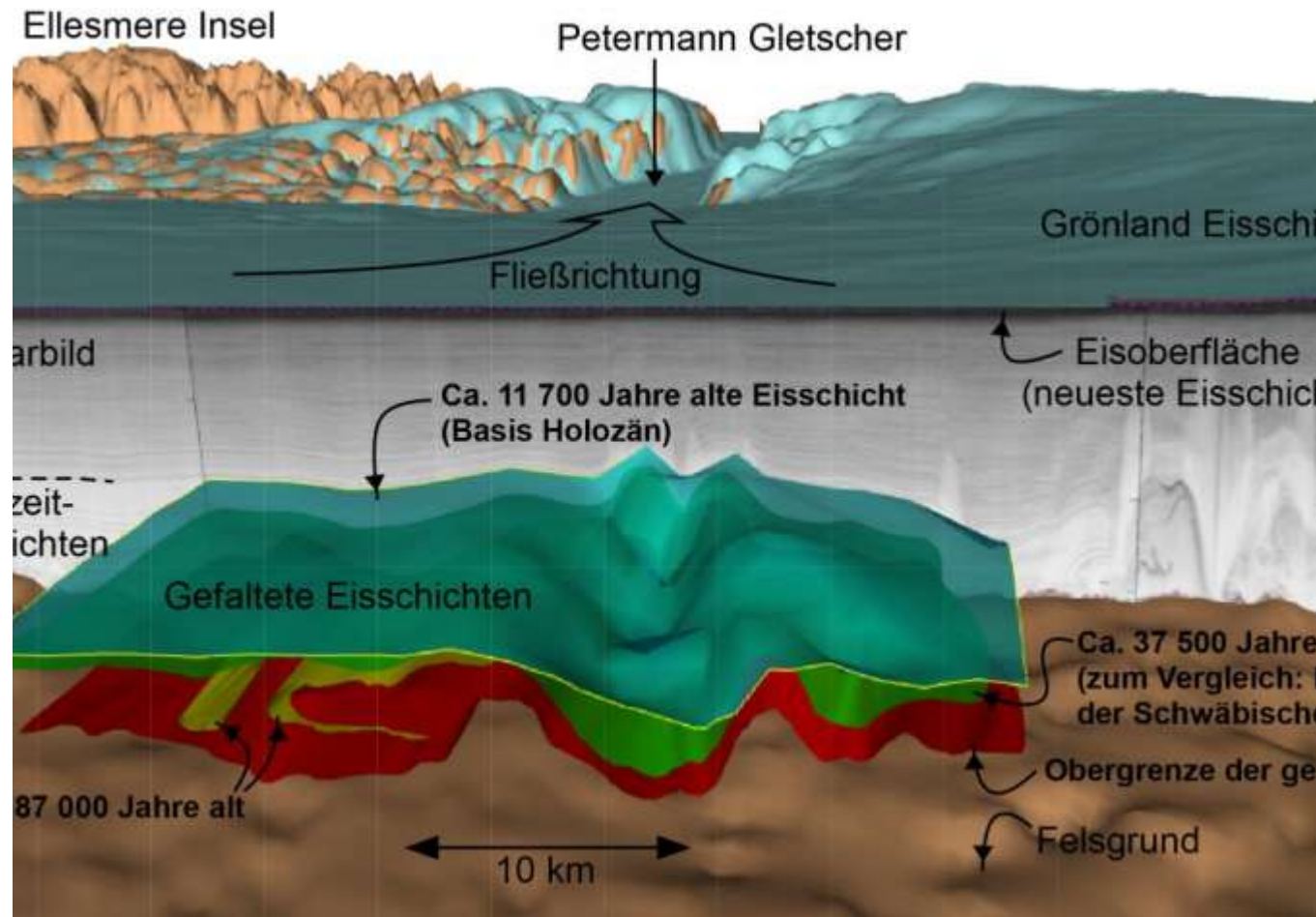
A single US shale oil field is responsible for much of the past decade's increase in global atmospheric levels of ethane—a gas that can damage air quality and affect climate.

The finding comes from a study showing that the Bakken Formation, an oil and gas field in North Dakota and Montana, is emitting roughly 2 percent of the globe's ethane. That's about 250,000 tons per year.

<http://www.futurity.org/bakken-formation-fracking-ethane-1149132-2/>

Full 3-D shape of large-scale folds in Greenland's ice cap revealed

29 April 2016



Credit: Paul Bons

The polar ice caps consist of layer upon layer of snow that is compressed to ice that slowly flows towards the sea. Airborne radar has indicated folds in layers that date back to the ice ages.

<http://phys.org/news/2016-04-full-d-large-scale-greenland-ice.html>

Insulating layer of air above the Greenland ice sheet reduces precipitation

29 April 2016



Max Berkelhammer digs a snow pit near Summit Station Greenland to collect samples for isotopic analysis at sled-towed research lab that breaks up the otherwise featureless snowy landscape. Credit: David Noone, Oregon State University

The Earth's climate has been warming, but even though the Greenland ice sheet is melting rapidly in the coastal regions, there are large parts of the ice sheet (40 percent) where there has hardly been any melting on the surface. A warmer climate usually also means that there is more precipitation, but there has been no increase in the amount of precipitation on the ice sheet. New research with participation of the Niels Bohr Institute shows that this is due to an insulating layer of air that forms near the surface during the winter, which insulates the ice sheet from the upper atmosphere and reduces both evaporation and precipitation. The results are published in the scientific journal, *Science Advances*.

<http://phys.org/news/2016-04-insulating-layer-air-greenland-ice.html>

Ice loss accelerating in Greenland's coastal glaciers, study finds

28 April 2016



Kristin Schild, a doctoral student in Dartmouth College's Department of Earth Sciences, uses a time lapse camera to study Greenland's melting glaciers. Credit: Kristin Schild

Surface meltwater draining through and underneath Greenland's tidewater glaciers is accelerating their loss of ice mass, according to a Dartmouth study that sheds light on the relationship between meltwater and subglacial discharge.

<http://phys.org/news/2016-04-ice-loss-greenland-coastal-glaciers.html>

New maps chart Greenland glaciers' melting risk

22 April 2016 by Alan Buis



The new maps show that the seafloor under Store Glacier, shown here, is almost 2,000 feet (600 meters) deeper than previously thought. Credit: NASA/JPL-Caltech/Ian Fenty

Many large glaciers in Greenland are at greater risk of melting from below than previously thought, according to new maps of the seafloor around Greenland created by an international research team. Like other recent research findings, the maps highlight the critical importance of studying the seascape under Greenland's coastal waters to better understand and predict global sea level rise.

Read more at: <http://phys.org/news/2016-04-greenland-glaciers.html#jCp>



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"People who live in rural areas and who use private wells need to have their well water tested, particularly if they are thinking about becoming pregnant," Jean Brender says. (Credit: [iStockphoto](#))

3 CHEMICALS IN WELL WATER LINKED TO BIRTH DEFECTS

TEXAS A&M UNIVERSITY → [Original Study](#)

Posted by [Christina Sumners-Texas A&M](#) on April 25, 2016

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Water doesn't have to smell or look wrong to be dangerous—especially to embryos in the first few weeks of development. A new study links three contaminants—nitrates, atrazine, and arsenic—to birth defects, and cautions people who get their drinking water from private wells to consider having them tested.

<http://www.futurity.org/well-water-birth-defects-1146552/>



Adult male *Microhyla laterite*. (Image credit: Ramit Singal)

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A TINY NEW FROG COULD PROTECT INDIA'S 'WASTELANDS'

NATIONAL UNIVERSITY OF SINGAPORE → Original Study

Posted by [National University of Singapore](#) on April 28, 2016

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Researchers have discovered a new species of narrow-mouthed frog that's only the size of a thumbnail.

They named the frog *Microhyla laterite* after its natural habitat, the laterite rock formations of India's coastal plains.

<http://www.futurity.org/microhyla-laterite-frog-1150252-2/>

HEADQUARTERS OF THE BUREAU OF SOILS
WASHINGTON D.C., 1901



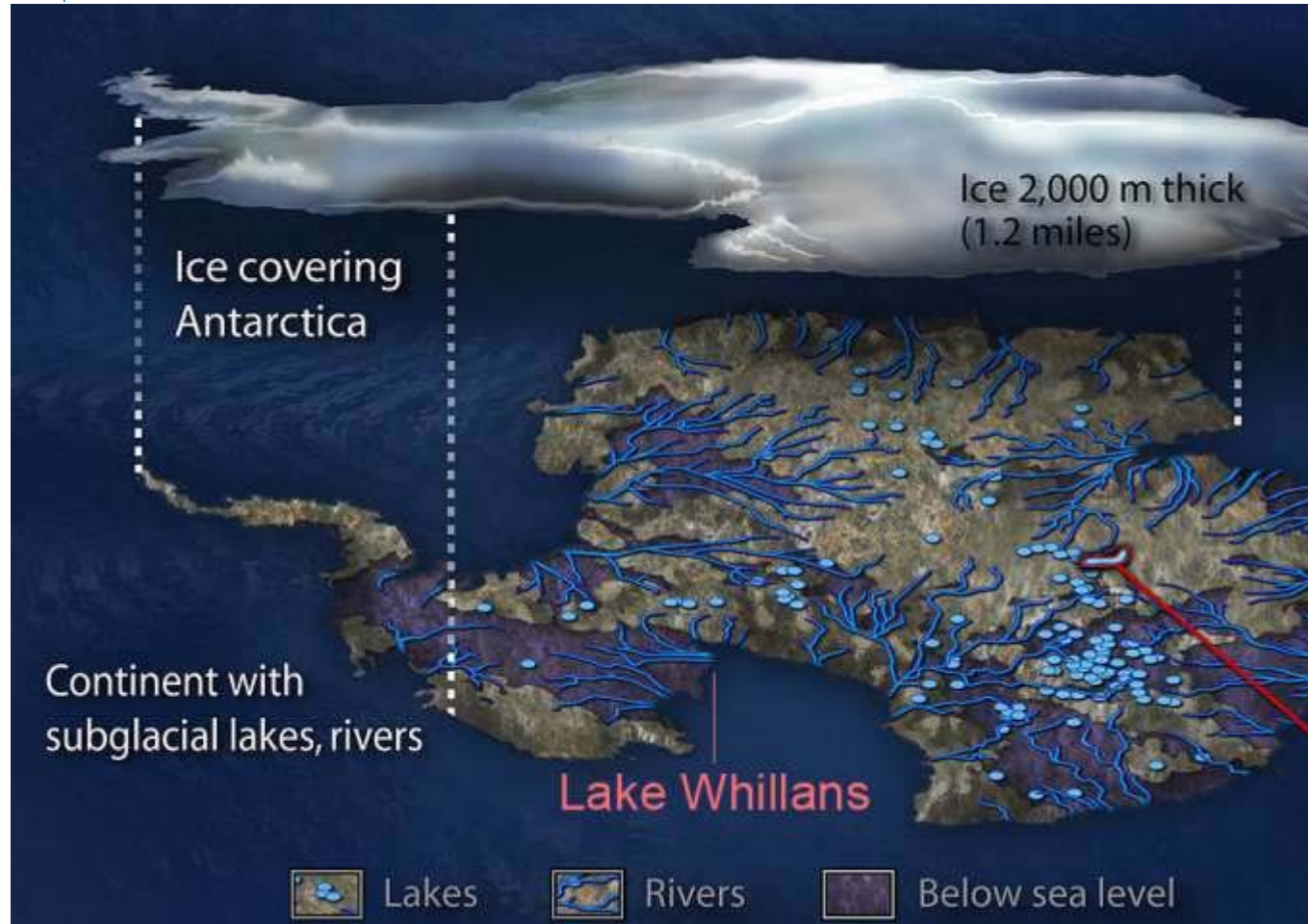
.. land must be nurtured; not plundered and v

-NRCS Founder Hugh Hammo

https://twitter.com/USDA_NRCS

What lies beneath West Antarctica?

29 April 2016



An artist's conception of the Antarctic subglacial environment. Credit: Zina Deretsky, NSF

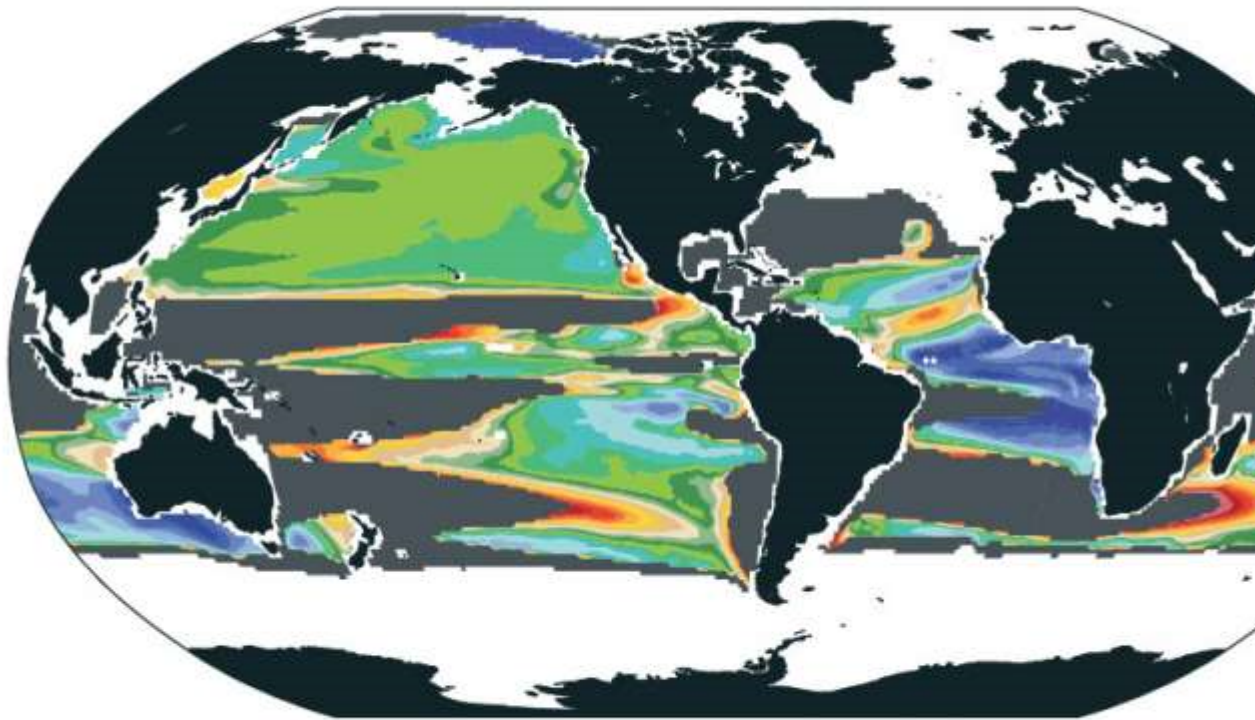
Three recent publications by early career researchers at three different institutions across the country provide the first look into the biogeochemistry, geophysics and geology of Subglacial Lake Whillans, which lies 800 meters (2,600 feet) beneath the West Antarctic Ice Sheet.

Read more at: <http://phys.org/news/2016-04-lies-beneath-west-antarctica.html#iCp>

Widespread loss of ocean oxygen to become noticeable in 2030s

27 April 2016

climate change is expected to become detectable



Deoxygenation due to climate change is already detectable in some parts of the ocean. New research from NCAR finds that it will likely become widespread between 2030 and 2040. Other parts of the ocean, shown in gray, will not have detectable loss of oxygen due to climate change even by 2100. Credit: Matthew Long, NCAR.

A reduction in the amount of oxygen dissolved in the oceans due to climate change is already discernible in some parts of the world and should be evident across large regions of the oceans between 2030 and 2040, according to a new study led by the National Center for Atmospheric Research (NCAR).

<http://phys.org/news/2016-04-widespread-loss-ocean-oxygen-2030s.html>

Dry soil to absorb some snowmelt heading to Colorado River

22 April 2016 by By Dan Elliott



In this April 14, 2013 file photo, hikers make their way along the banks of the Colorado River near Willow Beach, Ariz. Storms brought deep snow during the 2016 season to the mountains that feed the Colorado River, but the dried-out ...[more](#)

Storms brought deep snow to the mountains that feed the vital Colorado River this winter and spring, but the dried-out landscape will soak up some of the runoff before it can reach the river and the 40 million people depending on it for water.

Read more at: <http://phys.org/news/2016-04-soil-absorb-snowmelt-colorado-river.html#jCp>



<http://www.theguardian.com/environment/2016/apr/20/environment-instagram-photography-climate-change#img-1>

Without farmers understanding the importance of soil and having easy access to soil improvement methods, they cannot win the battle against declining soil fertility. And without soil fertility, they will lose the battle against hunger or poverty

Anne-Marie Steyn