

DiCaprio's Before the Flood: Powerful, Yet Misses on Soils and the Carbon Cycle

John Roulac

The new Leonardo DiCaprio documentary Before the Flood can now be seen on National Geographic.

The actor is a longtime advocate of environmental causes, and his film is surely helping to increase awareness of global warming and the challenges we face with climate chaos. In it, DiCaprio journeys from the remote melting regions of Greenland to the burning forests of Sumatra to the halls of the Vatican, exploring the devastating impact of climate change on the planet.

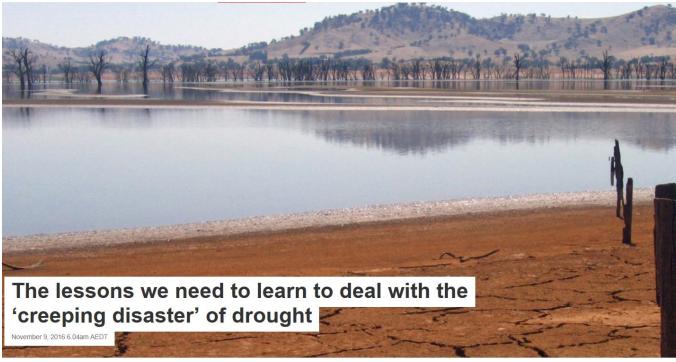
Before the Flood discusses how climate change is moving us rapidly into an era in which life on Earth might be much, much different. It does a great job describing the pressing problems we face. Yet, sadly, the film has a serious omission. It makes only passing mention of the food issue and almost no mention of soils or ocean acidification.



Carbon farming is the solution to climate change. It's time for us to de-carbonize our energy and recarbonize our soils.

Too few people know that Monsanto and industrial agriculture are contributing more to climate change than Exxon, Chevron and the entire transportation industry combined. Not many understand that a large animal feedlot is just as environmentally destructive as a coal-fired power plant—if not even more damaging. http://www.ecowatch.com/dicaprio-before-the-flood-carbon-farming-

http://www.ecowatch.com/dicaprio-before-the-flood-carbon-farming-2098508374.html



The Millennium drought had a huge impact on the Murray-Darling river system, suburbanbloke/Flickr/Wikimedia Commons, CC BY-SA

The journal <u>Climatic Change</u> has published a <u>special edition</u> of review papers discussing major natural hazards in Australia. This article is one of a <u>series</u> looking at those threats in detail.

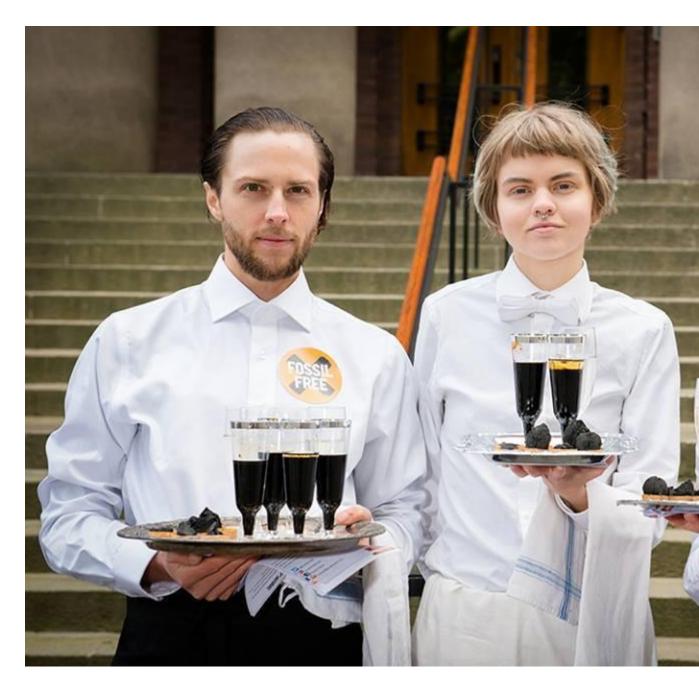
Droughts are a natural feature of the Australian environment. But the <u>Millennium dro</u> (or "Big Dry"), which ran from 1997 to 2010, was a wake-up call even by our parched s ards.

The Millennium drought had <u>major social</u>, <u>economic and environmental impacts</u>. It t gered water restrictions in major cities, and prompted severe reductions in irrigation

http://the conversation.com/the-less on s-we-need-to-learn-to-deal-with-the-creeping-disaster-of-drought-68172

Nobel Prize, It's Time to Divest From Fossil Fuels

Last Tuesday, Fossil Free Sweden finally received confirmation from the Nobel Foundation that it does not intend to adopt rigid sustainable investment guidelines which entirely exclude investments in the least sustainable companies on the planet—those driving climate change through the exploitation of fossil fuels.



We at Divest Nobel love the work the Nobel Foundation does in lifting the greatest achievements of mankind for mankind into the public consciousness. There is, to be frank, no other award on this planet is valued or respected more. But this is an intervention—we do not want the institution we love and which has done so much good for mankind, to be linked to an industry that will, if it is allowed to continue in its normal business, bring mankind to it's knees.

According to it's latest yearly report, the Nobel Foundation has investments in the fossil fuel industry, which is clearly in conflict with the aim of Alfred Nobel's will and the goal of the laureates. http://www.ecowatch.com/nobel-prize-climate-change-2066167963.html

Soil: more than meets the eye

Wisconsin State Farmer 7:45 p.m. CDT 4 October 2016



Ice blister near Mt. Sukakpak, AK. It formed when water became trapped between permafrost and a freezing front from above. As this internal water froze, it expanded upward, pushing the earth up and out into a mound.(Photo: Mary Tiedeman)

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Are you unaware of what is underfoot? Soil is all around us and easy to ignore. However, locked inside is a dynamic ecosystem of amazing complexity. The Soil Science Society of America (SSSA) October 1st Soils Matter blog post explains how soil's physical, chemical, and biological activities make soil more than dirt.

An example of cryoturbation: Ice blister near Mt. Sukakpak, AK. It formed when water became trapped between permafrost and a freezing front from above. As this internal water froze, it expanded upward, pushing the earth up and out into a mound.

http://www.wisfarmer.com/story/opinion/2016/10/04/soil-more-than-meets-eye/91580904/



The journal <u>Climatic Change</u> has published a <u>special edition</u> of review papers discussing major natural hazards in Australia. This article is the first in a <u>series</u> looking at those threats in detail.

Recent floods in <u>New South Wales</u>, <u>South Australia</u> and <u>Victoria</u> have reminded us of the power of our weather and rivers to wreak havoc on homes, business and even, tragically, lives.

As Dorothea Mackellar <u>poetically pointed out</u>, "droughts and flooding rains" have been a feature of Australia throughout history, so maybe we shouldn't be all that surprised when they happen.

http://theconversation.com/planning-for-a-rainy-day-theres-still-lots-to-learn-about-australias-flood-patterns-68170

Agroecology cools the planet - so why are Governments backing agribusiness?

Kirtana Chandrasekaran

It' a perfect win-win solution for World Food Day, writes Kirtana Chandrasekaran: agroecology that sequesters carbon into soils, making them more fertile, productive and resilient, while also supporting sustainable livelihoods and tackling climate change. But instead governments are desperately trying to attract agribusiness investment that does the precise opposite.



Agroecology is not just for the developing world: Amish farmer, USA. Photo: Ashley Morris via Flickr (CC BY-NC).

Kirtana Chandrasekaran is food sovereignty program coordinator at <u>Friends</u> of the Earth International.

http://www.theecologist.org/blogs_and_comments/commentators/2988239/agroecology_cools_the_planet__s o_why_are_governments_backing_agribusiness.html



Bushfires were the most common disaster in New South Wales over the past decade. AAP Image/Tracey Nearmy

Bushfires have been the most common natural disaster in New South Wales ov decade, according to our study <u>published today in Nature's Scientific Reports</u>.

Our study, the first of its kind, looked at disaster declarations in local government (LGAs). We found 207 disasters affected the state between 2004 and 2014. Bush the most common, responsible for 108 disaster declarations, followed by storm floods (44).

By looking at where disasters were declared, we found a "hotspot" in northern I Wales, which includes some of the state's most disadvantaged communities.

This suggests that to help communities prepare for disasters, we need to address causes of disadvantage.

http://theconversation.com/natural-disasters-are-affecting-some-of-australias-most-disadvantaged-communities-68165

Good nutrition begins in healthy soils

Patrick Holden

There's no such thing as 'healthy food' if it's not produced by sustainable farming systems on living soils, Patrick Holden told the recent 'Food: The Forgotten Medicine' conference. But after 70 years of industrial farming, there's a huge job to be done to restore our depleted soils and the impoverished genetic diversity of our seeds and crops.



Jerusalem artichoke harvest at Sandy Lane Farm, Oxfordshire. Photo: Sandy lane Farm via Facebook.

Patrick Holden is the founding director of the <u>Sustainable Food Trust</u>, working internationally to accelerate the transition towards more sustainable food systems. He is also Patron of the UK Biodynamic Association and was awarded the CBE for services to organic farming in 2005.

http://www.theecologist.org/essays/2988077/good_nutrition_begins_in_healthy_soils.html



The world's driest areas are tipped to get even drier, with potentially worrying implications for soil productivity. Author provided



The scale of these communities is staggering. The microflora in soils are the most abundant

http://theconversation.com/if-the-worlds-soils-keep-drying-out-thats-bad-news-for-microbes-and-people-53937

Battle lines

Authors







iStock

Norman Borlaug, whose 100th birthday we celebrate this year, was awarded the Nobel Peace Prize when the Green Revolution was just gaining traction. He well understood the relationship between peace and food and often quoted Food and Agriculture Organization founding director general John Boyd Orr's trenchant observation that peace can't be built on empty stomachs. When Borlaug received the Nobel in 1970, half the human population faced chronic hunger. In the following decades, new high-yielding strains, combined with growing use of fertilisers and increasing mechanisation, reduced the fraction of the chronically hungry to a sixth of the world population, even as it doubled to more than six billion. https://cosmosmagazine.com/society/battle-lines



A large proportion of Australia's perishable vegetables and fruit, such as strawberries, are grown on city fringe farmland around Australia. Matthew Carey

Our food systems are under increasing pressure from growing populations, diminishing resources and climate change. But, in a new report, we argue that city foodbowls – the agricultural land surrounding our cities – could supply more secure and sustainable food.

The <u>final report of our Foodprint Melbourne project</u> outlines a vision for "resilient city foodbowls" that can harness city waste to produce food, reduce dependence on distant sources of food and act as a buffer against <u>increasing volatility in global food supplies</u>.

But to do so we need to start planning now. Food is a basic human need – along with water, housing and transport – but it <u>hasn't been high on the planning agenda</u> for Australia's cities.

http://theconversation.com/the-key-to-future-food-supply-is-sitting-on-our-cities-doorsteps-69146

Soil Association campaigns against glyphosate in our bread

Laura Briggs

The Soil Association is calling on bread producers and supermarkets to stop making and selling bread products that contain traces of Glyphosate. LAURA BRIGGS reports.



All is safely gathered in... including Glyphosate (herbicide) residues in your bread!

Laura Briggs is an Ecologist news reporter

 $\label{lem:http://www.theecologist.org/News/news_analysis/2987995/soil_association_campaigns_against_glyphosate_in_our_bread.html$

Coal seam gas wells could be far more dangerous than we first thought

We have been relying on outdated and inappropriate techniques for measuring emissions from CSG, writes principal adviser at The Australia Institute **Mark Ogge**.



New University of Melbourne research, commissioned by The Australia Institute, shows the measuring and reporting of unconventional gas emissions in Australia is flawed — ignoring major potential sources of methane leakage. If the hidden emissions are similar to leakage rates being measured in US gas fields, they could overwhelm any government plans to meet Paris emissions reductions commitments. https://www.crikey.com.au/2016/10/26/coal-seam-gas-wells-could-be-more-dangerous-than-we-thought/



http://theconversation.com/firestorms-the-bushfire-thunderstorm-hybrids-weurgently-need-to-understand-68426

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136

natural hazards in Australia. This article is one of a series looking at those threats in detail.

Fire has been a driving force across Australia for millennia. Indeed, the health of many of

our ecosystems is intrinsically dependent on fire. But bushfires are also one of our most

The renaissance in agricultural education

Ten years ago, few students thought of a degree in agriculture, but thanks to co-operation between industry and academia, the message is now getting through that there are many good STEM jobs to be found in the sector. Jim Pratley looks to an exciting future.





Off-farm, as well as on-farm, the use of smart technologies is now well embedded.

Getty Images https://cosmosmagazine.com/society/the-renaissance-in-agricultural-education



Soil needs the right structure and microbial ecology to help your plants grow. Shutterstock

Email		As the weather warms and days lengthen, your attention may be turning to that forgotten patch of
> Twitter	22	your backyard. This week we've asked our experts to share the science behind gardening. So grab a
Facebook	179	trowel and your green thumbs, and dig in.
in Linkadla	[2]	

http://theconversation.com/fertile-ground-what-you-need-to-know-about-soil-to-keep-your-garden-healthy-65332

A decade ago agricultural education was in the doldrums.

Agriculture in schools was considered the second rate option and very few students were selecting it for higher education. The image of the sector was negative and its social licence was in question. Much of this was based on community perception and the misplaced interpretation of data by authorities.



Jim Pratley is Research Professor of Agriculture in the School of Agricultural and Wine Sciences at Charles Sturt University, Wagga Wagga, Australia. He is also the secretary of the Australian Council of Deans of Agriculture.

https://cosmosmagazine.com/society/the-renaissance-in-agricultural-education?utm_source=Today+in+Cosmos+Magazine&utm_campaign=8f04619ff0-RSS_EMAIL&utm_medium=email&utm_term=0_5f4ec2b124-8f04619ff0-179982353

Chris Uhlmann joins Barnaby in blaming wind energy for SA's blackout. They are dead wrong.

Uhlmann has publicly blamed wind energy for the recent blackout in South Australia.

Giles Parkinson



One of the most predictable reactions to the unprecedented blackout in South Australia on Wednesday was that wind energy and renewables would be blamed. https://www.crikey.com.au/2016/09/29/chris-uhlmanns-rant-against-wind-energy/

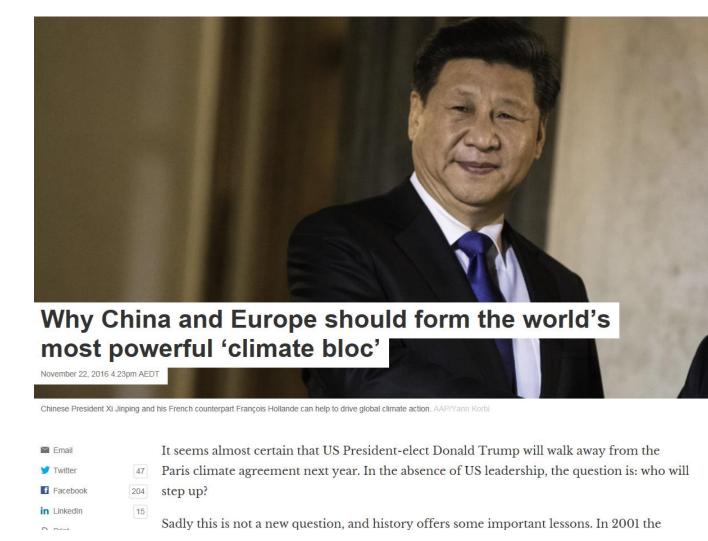
How *The Australian* got it hopelessly wrong on wind energy

The Australian got its facts wrong on wind energy in South Australia. Investments in wind have brought costs down.

Giles Parkinson

The Murdoch media attack on the Australia wind industry knows no bounds, and not many facts either.

This week's <u>front-page "exclusive" in *The Australian*</u> suggests South Australia's wind turbines were producing significant amounts of "negative power" from the grid at the height of the recent electricity "crisis". But the numbers it quotes are ridiculously wrong. https://www.crikey.com.au/2016/07/22/558133/



http://theconversation.com/why-china-and-europe-should-form-the-worlds-most-powerful-climate-bloc-69211

Trump is right: climate spending is damaging to the economy and will achieve little

By Nicola Wright - posted Monday, 28 November 2016

After pledging to scrap US involvement in the Paris agreement to combat climate change, president-elect Donald Trump seems to have made an about turn. He now says he has an 'open mind' to it although he did concede that his foremost concern is how it will 'cost our companies'. The question is, if global warming does present a problem, what can actually be done about it? Although Australia has one of the highest rates of emissions per capita, overall our contribution is small and even though we have willingly signed up to the Paris agreement, what effect will this actually have on the global climate?

In order to combat future global temperature rises, mainstream thinking tells us that leaving fossil fuels in the ground is the answer. According to the IPCC we must act now to reduce emissions substantially in order to reduce climate risks and increase our chances of adapting to a warmer world. Across the globe various carbon pricing schemes, taxes and renewable energy subsidies have been put in place in order to roll back the clock on global carbon dioxide emissions.

Nicola Wright is a senior writer at Liberty Works Inc.

http://www.onlineopinion.com.au/view.asp?article=18688

Three minutes to midnight and our politics ignores the climate threat

The further burning of vast carbon reserves is an attack on the human species, writes scientist **Dr Andrew Glickson**.

"We are as humans conducting a massive science experiment with this planet. It's the only planet we've got ... We know that the [...]

https://www.crikey.com.au/2016/07/19/inaction-on-climate-change-crime/



http://theconversation.com/five-reasons-why-cutting-nasas-climate-research-would-be-a-colossal-mistake-69336

Goodbye markets: Where the parties stand on climate change

While climate change has been virtually ignored in the election campaign, Australia looks to be headed for a far more interventionist approach to carbon abatement.



Bernard Keane

Politics Editor



Despite being the most critical long-term economic challenge facing Australia, climate policy has been almost entirely missing

[...]https://www.crikey.com.au/2016/06/22/silence-carbon-masks-swing-interventionism/



TIMSS has measured student achievement in maths and science at Year 4 and Year 8 in

http://theconversation.com/australian-schools-continue-to-fall-behind-other-countries-in-maths-and-science-69341

Australia and many other countries since 1995.

It's not just about Melbourne: Why we need a national approach to thunderstorm asthma

OPINION

Print

The Conversation

By Professor Guy Marks, UNSW

Posted yesterday at 1:31pmTue 29 Nov 2016, 1:31pm

The tragic deaths of at least eight people, apparently from thunderstorm asthma, highlights the risk from environmental hazards, even in seemingly safe urban centres in developed nations like Australia.

What is thunderstorm asthma?



Why can people with no history of respiratory problems suffer from thunderstorm-induced asthma and what causes it?

Events such as these, and others like the Hazelwood mine fire, bushfire and hazard reduction burns, toxic chemical leaks, infectious disease outbreaks and pandemics should prompt us to ask whether the health protection afforded to Australians is as good as it could be.

Guy Marks is the Professor of Respiratory Medicine at South Western Sydney Clinical School, UNSW.

http://www.abc.net.au/news/2016-11-29/calls-for-a-national-approach-to-thunderstorm-asthma/8074810?section=analysis

The 13 impossible crises that humanity now faces

George Monbiot

From Trump to climate change, this multiheaded crisis presages collapse. And there's no hope of exiting the 'other side' if political alternatives are shut down



Viggo Mortensen as The Man and Kodi Smit-McPhee as The Boy in the 2009 film The Road. Photograph: Dimension Films/Supplied by LMK

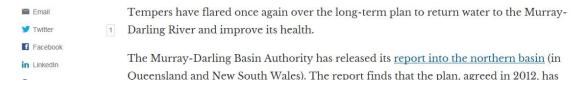
Friday 25 November 2016 18.00 AEDT

Please don't read this unless you are feeling strong. This is a list of 13 major crises that, I believe, confront us. There may be more. Please feel free to add to it or to knock it down. I'm sorry to say that it's not happy reading.

https://www.theguardian.com/commentisfree/2016/nov/25/13-crises-we-face-trump-soil-loss-global-collapse



The Murray-Darling is a complex freshwater ecosystem, Murray River wetlands image from www.shutterstock.com



http://theconversation.com/latest-murray-darling-squabble-sheds-light-on-the-plans-flaws-69484

Our very existence depends on soil, so why is it not protected?

Home | Agriculture & Food | Opinions

DISCLAIMER: All opinions in this column reflect the views of the author(s), not of EurActiv.com PLC.

By Balázs Horváth | European Environmental Bureau 12 Sep 2016



The UK has estimated that its soil will only be able to support 100 more harvests. [Shutterstock]

In the minds of many, soil is simply dirt, but without it we would all cease to exist. Unlike the water we drink and the air we breathe, soil is not protected in the EU and its quality is getting worse. This has to change, writes Balázs Horváth.

Balázs Horváth is senior policy officer at the European Environmental Bureau (EEB).

The headlines are full of stories about migration, food and climate change – soil, perhaps unsurprisingly, barely gets a mention in these stories, yet it is crucial to understanding all three issues. https://www.euractiv.com/section/agriculture-food/opinion/our-very-existence-depends-on-soil-so-why-is-it-not-protected/



achieve its climate target, or Nationally Determined Contribution (NDC). China's goal is to

China recently announced a 20% increase in coal power capacity by 2020. Does the new target contradict its pledge to peak carbon emissions well before 2030 under the Paris

Agreement?

China ratified the Paris Agreement in September 2016 and has put in place policies to

http://theconversation.com/chinas-plan-to-increase-coal-power-by-

Rock star-scientist Brian Cox confused on more than global temperatures

By Jennifer Marohasy - posted Thursday, 18 August 2016

20-is-not-the-climate-disaster-it-seems-68908

Celebrity physicist Brian Cox misled the ABC TV Q&A audience on at least 3 points-of-fact on Monday night. This is typical of the direction that much of science is taking. Richard Horton, the current editor of the medical journal, *The Lancet*, recently stated that, "The case against science is straightforward: much of the scientific literature, perhaps half, may simply be untrue."

Firstly, Cox displayed an out-of-date NASA chart of remodelled global temperatures as proof that we have catastrophic climate change caused by industrial pollution. Another panellist on the program, One Nation Senator Malcolm Roberts, tried to raise the issue of cause and effect: querying whether there really was a link between rising temperature and carbon dioxide. This is generally accepted without question. But interestingly – beyond experiments undertaken by a chemist over 100 years ago – there is no real proof beyond unreliable computer simulation models.

Jennifer Marohasy is a senior fellow with the Institute for Public Affairs.

Thanksgiving 2050: To feed the world we have to stop destroying our soil

- Molly Jahn, Christian Science Monitor
- 23 Nov. 2016, 10:53 PM



A farmer inspects the soil ahead of planting at a maize field in Wesselsbron, a small maize farming town in the Free State province of South Africa Thomson Reuters

At the height of the slave trade in 1785, an English divinity student, Thomas Clarkson, won a Latin essay contest considering the question, "Is it lawful to enslave the un-consenting?"

Few read it. Fewer took it seriously. But Clarkson, along with a small band of similarly inspired people, went to work, designing and executing a set of coordinated tactics to reveal the atrocities of legal slavery in the systems that brought sugar to

British tables. http://www.businessinsider.com/to-feed-the-world-we-have-to-stop-destroying-our-soil-2016-11?IR=T



visibles access coral deaths in the worst affected part of the Deef in November 2016. Andreas District ADP Centre of Evenlines for Coral Deef Studies. Author provided



Two-thirds of the corals in the northern part of the Great Barrier Reef have died in the reef's worst-ever bleaching event, according to our latest underwater surveys.

On some reefs in the north, nearly all the corals have died. However the impact of bleaching eases as we move south, and reefs in the central and southern regions (around Cairns and Townsville and southwards) were much less affected, and are now recovering.

In 2015 and 2016, the hottest years on record, we have witnessed at first hand the threat posed by human-caused climate change to the world's coral reefs.

Heat stress from record high summer temperatures damages the microscopic algae

http://theconversation.com/how-much-coral-has-died-in-the-great-barrier-reefs-worst-bleaching-event-69494

Keeping soil on farms and out of rivers

By Dr Lisa Harper

10:00 PM Tuesday 22 Nov 2016

Authors





Research Program Sustainable Great Marine Science





The Whangaehu River took parts of Andrew Pearce's Kauangaroa farm in June last year. PHOTO/ FILE

Since the 1950s farmers have been working to control erosion, but there's a lot we still don't know about the processes involved.

Erosion is a gradual wearing away of land by wind, rainfall or wave action. Sometimes it happens dramatically, as we have seen in North Canterbury paddocks after the swarm of earthquakes. http://www.nzherald.co.nz/wanganui-chronicle/opinion/news/article.cfm?c_id=1503423&objectid=11752699

Smallholders can be agents of change

Global Soil Week > News and Opinion > Smallholders can be agents of change

The Global Soil Forum at the UN High-Level Political Forum on Sustainable Development

The IASS Global Soil Forum is attending the second meeting of theHigh-Level Political Forum on Sustainable Development (HLPF). Our side event "Small food producers and family farmers as agents of change for sustainable agriculture and food systems in the post-2015" took place on 1 July 2014. In his keynote address, Jes Weigelt, coordinator of the Global Soil Forum, emphasised that security of tenure (currently listed under Sustainable Development Goal 1) not only serves to eradicate poverty: "tenure security also has the potential to increase food security and the UN should

consider including it as an indicator there."

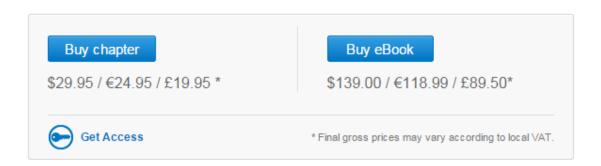


http://globalsoilweek.org/news-and-opinion/smallholders-can-beagents-of-change

Chapter
Global Soil Security
Part of the series Progress in Soil Science pp 371-381

Soil-Water-Food Nexus: A Public Opinion and Policy Perspective

Kent E. Portney Market E. Portney



Abstract

This chapter reports on analysis of public opinion related to the agriculture-water nexus from a small number of questions asked of well over 2000 respondents in the 2013 National Public Water Survey and uses this analysis to begin to elucidate some publicly perceived connections as reflected among the general public. Results show that people perceive that water is very important to agricultural production and that drought conditions have severe negative consequences for agriculture, although not necessarily damage to plant and animal species. When people perceive that the effects of drought on agriculture are severe, they are far more likely to support actions and public policies to conserve water.

Keywords

Public opinion - Nexus - Water conservation - Agriculture - Public policy

http://link.springer.com/chapter/10.1007/978-3-319-43394-3_33

There's no such thing as 'healthy food' if it's not produced by sustainable farming systems on living soils Patrick Holden is the founding director of the Sustainable Food Trust



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