

Permaculture Cairns February Newsletter

EMPOWERING COMMUNITIES WITH SUSTAINABLE SOLUTIONS



Care for the Earth, Care for people, Share the excess

Permaculture Cairns Incorporated

Web Site: www.permaculturecairns.org.au

PERMACULTURE CAIRNS BACKYARD MEET **Saturday 13th February 8.45 for 9am start - 12pm finish**

Please note that this year, every second month will be a back yard/ workshop style meeting on a Saturday instead of our Tuesday night meeting at ARC.

"WHAT WEED IS THAT?"

Presenter: Wayne Rankine

The Meeting Venue: Craig Phillipson's home at 34 Miles St. Manoora
This is a Members only event but everyone is welcome to become a Member
Numbers are limited so please book and prepay before the event.

A \$10 fee will be charges to cover expenses.

Bring your note pad, pen, camera, hat, sunscreen and a plate of food for a light lunch.

Register at info@permaculturecairns.org.au

**Payments may be made at Cairns Penny in Grafton Street or online to
Permaculture Cairns Account BSB 704-966 A/c 100009440**

PERMACULTURE CAIRNS INC **INTERNATIONAL PERMACULTURE DAY** **Sunday 1st MAY 2016**

Planning is in progress for our most important day!!! Be part of it.

Would you like to help us plan, or take part in activities or organise an activity, we would love to have you on board. We need you to speak up NOW. We will need volunteers on the day. It's fun and you get to meet some great people.

If you would like to have a stall to sell a product, plants, seedlings, craft items, chooks, garden items, have a display, hold a workshop, make a demonstration, or presentation please contact us at info@permaculturecairns.org.au or talk to a committee member ASAP

PERMACULTURE CAIRNS PRESIDENTS REPORT FOR 2015

I wish to thank my Committee members:- Treasurer, Jenny McGrath, Secretaries, Lois Hayes and Peter Spooner, and Bruce Zell as Vice President for all their work this year and all members who have helped out over the past year, at our workshops, meetings and events, especially the Permaculture Expo day and Council's Sustainability Day.

The Permaculture Expo Day was a great experience with permaculture type displays, workshops, guest speakers, sausage sizzle, craft stalls, plant stalls, FNQ Biodynamics with biodynamic preps., Cairns Seed Savers, along with local business people explaining their sustainable products. And don't forget the python, and the chooks for the kids entertainment.

The year was full of exciting events, we held a number of workshops, eleven monthly meetings with some really informative Guest Speakers and we made a tour to a Ravenshoe Biodynamic property.

Membership remains steady, with new people joining and more people subscribing to the newsletter, 440 people receive our newsletter to date. Financially we started the year with approx. \$6000 and ended with approx. the same amount, but we purchased a Microscope for \$1000, so the workshops and members fees help to pay for the Microscope.

I will be stepping down from the Presidency, to spend more time developing a workshop on how to Grow Nutrient Rich Food which will include work with a microscope to gauge nutrients in soils, manures and composts. And of course I will be caring for my Permaculture Garden and continue to produce Tropical Perennial Vegetables for sale.

I congratulate the 2016 Committee Members and wish them all the best for the year.

2016 Committee Members are - Jenny McGrath, President, Peter Spooner, Secretary & Craig Phillipson as Treasurer.

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Permaculture Principle No. 1 Observe and interact

“Beauty is in the eye of the beholder”

By taking the time to engage with nature we can design solutions that suit our particular situation.

This icon for this design principle represents a person 'becoming' a tree. In observing nature it is important to take different perspectives to help understand what is going on with the various elements in the system. The proverb “Beauty is in the eye of the beholder” reminds us that we place our own values on what we observe, yet in nature, there is no right or wrong, only different.

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MEMBERSHIP Reminder!!! MEMBERSHIP FEES FOR 2016 ARE NOW DUE AND PAYABLE!!!!!!!

Growing food in the Wet Tropics in February

February is usually a very hot, wet and humid time of the year as if I need to tell you that. Heavy downpours of tropical rain will smash tender seedlings, unless some protective cover is used.

So the easiest plants to grow now and all year round are the tropical perennials ie. Kang Kong, Okinawa Spinach, Sambung, and Brazilian spinach. These can be part of your landscape, all will grow in part shade or full sun if given enough water. The spinaches all make a great ground cover under trees and shrubs.

Sweet leaf and Aibika are two shrubs which are easy to grow, full sun or part shade, sweet leaf is a rainforest plant and if kept around the metre to 1.5m it can be easily harvested. The leaves are very high in protein, and may be used to make Pesto, used in salads and the pea favoured new shoots are delicious.

Aibika is a shrub growing to 3 metres but is best kept around the 2 metre size. It has large leaves which are great for wrapping food before cooking. Lots of vitamins and calcium.

Snake beans grow well in the hot weather along with eggplant, capsicum, cucumbers, melons, pumpkin, taro, cocoyam, cassava, Tahitian taro, dragon fruit, pineapples, bananas, soursop, papaya.

Herbs: if grown in a very well drained potting mix you can grow the Mediterranean herbs, Thyme, Oregano, Marjoram and Rosemary all year round in full sun. Some easily grown herbs for the tropics are ginger, turmeric, galangal, basil, lemon grass, Thai basil, holy basil (for tea making), mushroom plant, garlic chives, shallots, chives, five spice and mint,

Some magazines print lists of plants to plant in the tropics now such as brussel sprouts and cauliflower which take 5 months to grow. But these would not survive the hot and humid conditions on the coast. Although I have grown broccoli successfully but only by planting later in the year, which shortens the harvest period. Better to wait till April to plant, Kale, Broccoli, Florence Fennel, Cabbages, Wom Bok and French beans.

Besides the perennials there are the Asian Veg, amaranth, bok choy, pak choy, tat soi, and of course rocket, wild rocket and lettuce (lettuce wont germinate in this weather, buy seedlings from Bunnings as they come from the Atherton Tablelands and are a little better climatised than those from down south.

It is a good time to start Pintos Peanut as a deep rooted legume ground cover in the orchard or as a substitute for lawn in your garden. It grows to a maximum of 150mm high and stores nitrogen in the soil. The flowers are a happy yellow. Also makes a good material to add to compost heaps. Surpresses weeds and creates mulch when cut and when cut the roots die back which adds organic matter to the soil.

The other useful plants for now are Pigeon Pea, Arrowroot.

The Pigeon Pea is a easily grown, shade producing, deep rooted small tree to 3 metres, which can be pruned for mulch material or for making compost. I plant seeds after soaking them overnight at the beginning of the wet season for shade and for compost material. When no longer needed chop at ground level and it will not shoot again. The roots as they decompose will add organic matter to the soil. The peas may be eaten when green or when dried and cooked to make Dahl. The seeds make a great food for chickens, turkeys etc.

Arrowroot is excellent for chop and drop, making compost, feeding to goats, pigs and chickens. And if the young purple bulbs are roasted before they send out a leaf they are very sweet.

Now is a great time to clean up the garden, turn you weeds and pruning from shrubs and trees into compost. Stop weeds from seeding and eventually you will win. And Mulch, Mulch, Mulch and Mulch.

Happy Gardening

Written by Carol Laing, Permaculture Cairns.

Nutrition Gardening® – Redaiming Responsibility for Your Own Health – Part 1

By Graeme Sait from NutriTech Solutions

I have long maintained that the vegetable garden is the **ultimate wellness tool**. Science is increasingly recognising that food is truly our greatest medicine. There is no food more valuable than pesticide-free food, grown in healthy soils and harvested when ripened naturally, immediately before it graces your plate.

Freshly harvested fruit and vegetables feature antioxidants, vitamins and protective phytonutrients encased in a supportive matrix that ensures maximum health benefits. When we dumb down nutrition with supplements, there is no comparison to the real stuff. No nutrient is an island and Nature recognises that. She provides hosts of co-factors in fresh food to maximise the benefits of everything. You may be wondering why supermarket vegetables don't usually deliver the protective punch of the homegrown. Here are some of the reasons:

Lamenting Lost Nutrition

We are what we eat and what we eat comes from soils that are a shadow of their former selves. We have mercilessly removed the minerals from our food-producing soils with extractive agriculture, whilst decimating the organisms that help deliver those minerals. We have then processed more nutrients out of this food or picked it early and stored it long enough to further deplete its goodness. Numerous studies have confirmed this decline. In fact, nutritionists now claim that our food contains just 20% of the nutrition found in the food consumed by our grandparents when they were children. A recent WHO study could not find a degenerative disease that did not have a nutrition link.

The massive explosion in sales of supplements in recent decades is testament to our mass recognition that something is missing. Our food is not what it used to be and neither is our health. The answer is to adopt **Nutrition Gardening®**. This home garden solution, however, offers more than just a tool to counter lost nutrition. It has other profound benefits ranging from forgotten food flavours to mental wellbeing, as well as an invaluable contribution to planetary health.

Mastering Taste

The flood of TV foodie programs reflects an unprecedented flavour awakening. In a rebellion against the increasingly bland, we are discovering our inner chefs and seeking to colour one of our most pleasurable pastimes. However, the spice secrets and creative combinations pale in comparison to the pleasures to be discovered in nutrient-dense food, freshly harvested. The heirloom tomato and the crisp Russian kale can add more depth to your dish than the cleverest of Master Chef tips.

Peace in the Soil

We are here to experience as much peace and happiness as is possible in our short lifetimes. However, somewhere in our relentless quest for the “material”, we have lost sight of the “real”. Stress and fear are the opposites of peace and happiness, yet they reign supreme in many lives.

The home garden can be the solution to this misguided mismanagement of our primary purpose. The sun on the shoulders, the sweat on the brow and the sweet smell of healthy soil is where peace resides. The gardeners amongst us will understand this equation and there is now some science to help explain what we intuitively knew.

From an aromatherapeutic point of view, the smell of a healthy soil ranks somewhere near freshly baked bread and freshly ground coffee – but there is more. Recently, a soil bacteria called *Mycobacterium vaccae* was found to stimulate production of the “feel good” hormone, serotonin. It is a lack of this hormone that lies behind most depression. The organism must be ingested to create this wonderful effect, so don't be afraid to get dirty.

Important caution: Soil eating is not advised if you use pesticides in your garden – heaven forbid such pollution of sacred space!

The Planetary Priority

These gardening gains extend beyond your increased mental and physical wellbeing. They also include a profoundly important contribution to **planetary health**. We are in the midst of an unparalleled climate crisis that threatens our very existence. Many are seeking to contribute, but there is scant understanding of how one can make a difference. It is important to realise that turning off your lights or commissioning solar panels are less important than **tending your own patch** and building the humus levels in your soil. An increase of just 1% organic matter in our soils can reverse global warming. Here's how it works:

There are the same number of carbon molecules on the planet that have always been here. You can't make more, so it is all about where they are stored. Carbon is either stored in the soil as humus, in all living things (including animals and plants), or in the atmosphere, as carbon dioxide. It constantly moves between these three places as part of the **carbon cycle**. On a global level, over the past decades of extractive agriculture, we have lost two thirds of our humus (down from 5% average organic matter to less than 1.5%). That carbon is now in the atmosphere as CO₂, thickening the blanket of greenhouse gases, trapping more heat and warming our climate.

When we build humus in our soil, we are effectively sequestering carbon from the atmosphere and addressing this problem. **Compost** is part of the solution, as it offers a double bonus. You have stabilised carbon in the compost as humus, but when you introduce this inoculum of diverse soil workers, you trigger much more humus production. However, you must also provide the minerals and soil conditioners that support humus-building microorganisms and this will be discussed in detail in next week's blog.

Clean Food for Your Family

I walked behind a professional couple at a local farmers' market recently and overheard their conversation. One asked the other "why do so many stalls have signs saying '**chemical free**'?". I was amazed at the naivety of the question but the answer floored me! "It's because they are not applying liquid fertilisers", was the innocent reply.

Many people are simply not aware of the grim realities of modern food production. Potatoes, our favourite vegetable, are sprayed with fungicides and pesticides a dozen times before they are chipped and fried. The last of these applied contaminants is of most concern. The vast majority of conventional potato producers kill off their crop with a herbicide called Paraquat (one of the nastiest of the nasty). They claim that the transference of the chemical to the tuber is minor at this late stage of the crop cycle, but nutrient foliar sprays can still boost spud size at this stage, which obviously involves transference.

There are two things we were not told about when we embarked on the "chemical experiment" in food production. We were not made aware of a phenomenon called "**bioaccumulation**", or a likely byproduct called "**the cocktail effect**". Our liver is our principle detox tool and this overworked organ is equipped to manage any natural contaminant. However, this principle guardian has no answer for many man-made chemicals so, recognising that they may not be good, the liver ships them off to our fat cells to limit their liability. Here, they accumulate and can become something of a time bomb. It is no different with livestock, hence the common caution about consuming the fat of animals reared in intensive confinement.

The "**cocktail effect**" refers to the impact of unresearched combinations when we eat something like a tomato, which may have residues of multiple pesticides. Tomatoes are typically sprayed with three fungicides and three insecticides every three days, from the time they are planted until the time they are pushed over. We may have determined that the minimum residues of each chemical did not kill a lab rat over a three-month trial period, but there is no research about their combined effect. In one rare U.S. study involving 100 combinations of ten chemicals, three new Class 3 carcinogens were discovered. This means that some permutations of the cocktail were proven to give cancer to animals, but it is less ethical to prove this with humans.

Grow Your Own Health

At this point, you are possibly rethinking your food choices and perhaps considering organic alternatives. However, this option is considerably more expensive and still does not guarantee nutrient density, flavour or shelf-life. "**Organic by neglect**" is common in an industry so dominated by what you cannot do, that it tacitly supports doing nothing at all. The answer to this quandary is to **grow your own nutrition**. Do it with minerals, microbes and humates and become a proud Nutrition Gardener®, supporting yourself, your family and your planet.

How to wipe out whitefly

By: [Organic Gardener](#) | January 4, 2016

Fight whitefly with home-made sticky traps, writes HELEN MCKERRAL.



Photo: istock

Whitefly are a nasty pest that attack a wide range of plants from tomatoes to beans. These sap suckers cause yellowing, leaf loss, wilting and stunting. They also exude honeydew that attracts ants and black sooty mould. Whitefly congregate on mass. One control approach is to hang sticky strips in your vegie patch and greenhouse or instantly eliminate clouds of whiteflies with a yellow sticky paddle! (Whiteflies are attracted to yellow.) Here's how to do it.

What you need

- Yellow plastic document folder (or recycled piece of yellow plastic)
- Horticultural glue* and spatula
- Scissors
- String and hole punch and/or gaffer tape
- Bamboo stakes

Step 1: Cut document folder into strips approximately 10cm x 20cm, or two A4-sized paddles plus strips.

Step 2: Punch holes into strips and attach string. Gaffer tape paddles to bamboo stakes.

Step 3: Spread glue – which whiteflies will stick to – onto strips or paddles.

Step 4: Hang strips in vegie patch. For heavy infestations, disturb foliage and swish paddle nearby to instantly reduce numbers, then place paddle in the ground for a long-lasting effect. When traps lose their stickiness, clean and apply fresh glue.

* Horticultural glue, available from garden centres, can be replaced with home-made glue of petroleum jelly and detergent at a ratio of 1:1. Home-made glue is cheaper but less effective.

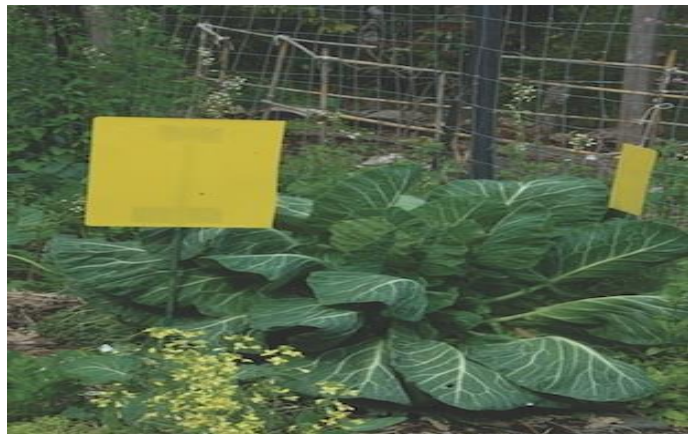


Photo: Helen McKerral

For more advice on what to do in your summer garden pick up a copy of the [January/February issue](#) of Organic Gardener magazine available from newsagents, [ABC Shop online](#) and organicgardener.com.au.

LOCAL WORKSHOPS AND EVENTS

Cairns Seed Savers Meeting

Cairns Seed Savers is an informal group of individuals with a passion for saving seeds and growing fruit, vegetable and other useful plants that have been passed down through generations and are adapted to our local conditions.

WHEN: Sunday 14th February 2016

WHERE: Dino and Emily's place, 49 Boland St. Westcourt (near DFO)

PHONE: Jo 40553053

WHAT TO BRING:

- Organically grown, non-hybrid seeds if you have any spare
- A plate of food to share for lunch • Your own chair, plate and cutlery
- Your spare seedlings, cuttings, plants and produce for the Share Table

AGENDA:

10 – 11AM Meet'n'greet, general housekeeping, seed sorting and access to Seed Bank

11 – 12 Talk by Sally Cowan on "Good and bad bugs in your garden - the North Qld quarantine strategy, overview of her Dept and what they look out for". She will bring boxes of insects and a microscope.

12 – 12:30 Enjoy a shared lunch

12:30 – 1PM "Show and tell" of any of your great ideas/inventions

Tour of Dino and Emily's evolving garden

Everyone Welcome - See you there!

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COMMUNITY FOODS Newsletter

January 2016

We've missed keeping in touch with you, but that's all about to change in 2016.
Please forward this on to anyone you think might be interested.

Here's the latest hot off the press...

Want to work with Community Foods?

We need a Permanent Part-time co-ordinator - go getter! Are you a committed, community-focused person with a strong knowledge of wholefoods who understands the value of co-ops and the importance of volunteerism. Retail experience essential. 25 hours per week - starts asap in February. Enquiries / to apply: email beth@fnq.net.au
[For more details click here...](#)

Plant Foods comes to Community Foods

Community Foods is working in partnership with Plant Foods, a not-for-profit, community project of Paradise Earth Foundation. It brings together producers of organically grown plant foods with the Cairns community. The aim is to help secure a future for producers while providing greater access to farm fresh produce at wholesale prices...[read more here.](#)

Gorgeous Olive Oil

Community Foods stocks high quality organic extra virgin olive oil from an Italian family business based in Leeton New South Wales. The Tocin family have been supplying Community Foods since the late 1990s and they continue to be a source of reliable quality oil

Have you tried olive oil with Umeboshi plum vinegar over fresh lettuce leaves with a sprinkling of sesame and sunflower seeds? [Read more here....](#)

Regards,

The Team at Community Foods Co-op

Address: 74 Shields St, Cairns QLD 4870

Phone: 07 4041 5335

Email: shop@comfoods.org.au

Website: <http://www.comfoods.org.au>

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FNQ COMMUNITY EXCHANGE February Calendar

Relocalising all of Far North Queensland

LETS is a Community Trading System which uses "Bartles" for trading.

MALANDA - Saturday 6th 10 – 12 noon. Malanda Trade in the Park. Eacham Memorial Park, opposite the post office. Bring along morning tea to share, something to trade and display your wares. There is a shelter, so it's an all weather event. Event host: Katrin 40966755.

CASSOWARY COAST - Sunday 7th- Johnstone River Community Garden Picnic Promoting Ovarian Cancer awareness, Seedsavers & LETS. Flying Fish Point Rd, Innisfail. Tropical gardening workshop and garden tour. Activities from 9am , garden harvest lunch at noon (this is not a LETS event). All welcome. Event host: Bernie - 0403523244.

RAVENSHOE - Saturday 20th- 12 - 2pm Trade afternoon Youth Shed, Ravenshoe Community Centre, 3 Bolton Street. Following Community Gardens gathering - come and check it out. Child friendly event. Bring something to trade and some lunch to share. Event host: Kathy - 40977864.

MALANDA – Saturday 20th- 6-9pm Trade & Asian Dinner Night at Katrin's place, 33 Park Avenue, opposite the Malanda Caravan Park. Bring something to trade, and a plate to share for dinner. This is a child friendly event and kids can make use of the huge toy room. Event host: Katrin – 40966755.

CASSOWAY COAST – Sunday 21st- 11am – 3pm LETS Trade. Bring Lunch to share, (BBQ available) items to trade, information on services offered and some good conversation as well. Please consider BYO plate & cutlery to save our host excessive dish duties. All welcome. Event host: Bernie - 0403523244.

ATHERTON - Monday 22nd- 10am - 1pm Workshop: Create Garden Pavers "the easy way" 17 Evans St, Atherton. Bring your own molds eg old frypans or small foam boxes and flat decorative items, such broken tiles, crockery, anything that is smooth enough to walk on. Restricted to 4 people per session bookings essential. Cost is \$5 + 10 Bartles. All weather Activity. To book text Event Host: Irene 0439914876.

YUNGABURRA - Sunday 28th- 12 - 2pm Trade Afternoon at that retro café and Red Shed Shops. This event is immediately after the Yungaburra Market. Bring along something to trade , a rug to display your wares. 100% Bartles for drinks from the menu. (you will need cash for lunch and drinks from the display fridge). Event host: Melitta – 40952340.

CAIRNS CITY - Sunday 28th- 12- 2pm - Lafew Teahouse, 33 Sheridan Street, Cairns. LETS relies on member initiative and participation to make events happen. At Lafew we provide a prime position opposite Rusty's Market. We offer: Kombucha, tea & coffee available 50/50 Bartles/cash, bring your trading sheets and goodies. We like to focus on edible plants and would love to see our garden area used as a drop off and pick up for edibles. For new members -please drop by and chat to the LETS traders - you can sign up on the trade day. Event host: Lorna – 44205903.

What to bring to Trade Events where not specified above: food & drinks for yourself or to share, or money and/or Bartles at some venues, friends, Trading Record Sheet and pen, any goods you wish to trade, table/rug to display them upon is often useful, your own chair at some venues, promotional material of any services you are offering if applicable, \$20 to join FNQ Community Exchange if you are not yet a member.

tablelandlets@gmail.com - 4096 6972 - www.tablelandlets.org - www.communityexchange.net.au

NEWS & INFORMATION FROM HOME AND AROUND THE WORLD

Here are some stories from ABC Rural Roundup Newsletter

For the full stories and a lot more go to the web site

<http://www.abc.net.au/news/rural/>

A bumper edition of Rural RoundUp this week.

Did you know consumers in Texas in the US are paying five dollars [for one Australian mango](#) .

And in case you missed the news [the Lake Charm 'bonking bales'](#) have been rebuilt in regional Victoria. This controversial piece of hay bale art has become a tourist attraction, but continues to come under attack from vandals and arsonists.

Honey isn't the only powerfully anti-microbial fluid bees are capable of producing, with new research revealing the seminal fluid of male honey bees can destroy the fungal spores of one of the most wide-spread bee pathogens.

"What excites me about this research is that it shows the bee can strike back, it has an immune system that is active and can control infections," the Centre for Integrative Bee Research director, Dr Boris Baer said.

[More](#)

Poisoned mangoes, hidden cameras and patience controlling feral pigs in Mackay sugar cane project

A feral pig eradication pilot project near Mackay in Queensland is using hidden cameras and poisoned mangoes to pioneer better strategies for controlling the pest in sugar growing regions.

Feral pigs caused \$7 million of damage to sugar cane crops in the region last year.

Farms devastated by flooding in Western Australia's Great Southern

Growth in China drives Australian wine exports to highest value in almost a decade

Australian beekeepers reject research claims their honey is world's most contaminated

'Unprecedented' water shortages in south west Victoria expected to affect Australian red meat supply

Analyst predicts gold price will remain strong, as other metals take a hit from declining demand

Study finds glyphosate-resistant canola unlikely to become invasive, escaped seeds easily controlled

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EARTHSHIP 360 – Jamaica Earthship Build



March 21 – April 1, 2016. Jamaica Earthship Build: International Reggae Museum

Participate and Learn. We are helping to build the International Reggae Museum in Jamaica, only *one mile* from the Bob Marley Mosaleum on Mt. Zion. There are only 18 spots available on this build. This is a 12 day intensive sustainable design and construction educational workshop. With evening lectures and hands-on instruction, learn all about greywater systems, solar & thermal heating and cooling, catch water and more.

[Click here to sign up now](#)

only 18 spots available. Book NOW and book your airfare NOW.

What you will learn

in the field, lectures and 'classroom' time.

- Tire, Can and Bottle Walls.
- Heating & Cooling with no Fossil Fuels.
- Greywater Systems with Flush Toilets & Contained Botanical Cells.
- Catch Water, Potable Water.
- Food Production

Lectures by Jonah Reynolds, Earthship Biotect and round table discussions on **open source sustainable architecture**.

All students receive

- an amazing all natural exclusive **Earthship Shirt**
- an in-depth new crowd-sourced **Earthship Book** covering all systems and building methods
- an 18 month **Earthship Calendar** with professional images from the 12 day build.

12 days: \$1200: Does not include airfare, accommodations, breakfast or dinner. Lunch IS provided on site. Everything will be arranged for you.



Help build the first urban biofueled and solar powered Earthship in Philadelphia.
This project seeks to educate and invigorate Philly!



About This Project

[Donate today!](#) Your contributions will go towards funding the Solar/biofuels, Electricity & Hot Water System for the first Urban Earthship Demonstration & Education Center in West Philadelphia.

Solar panels, batteries, charge controller, water heater, and other components essential to sustainable systems will be purchased with your donations. We need about \$25,000. We have really awesome gifts for the supporters of this project!

[Your donation](#) will support our efforts to invigorate and educate the Philadelphia community. This is just the first project in a series intended to empower Philadelphia

residents to build housing for themselves that will dramatically lower their monthly expenses.

Too many communities in Philadelphia (and the World) are feeling the economic crunch that defines our times. This project aims to provide citizens with the skills necessary to take control of the expenses that diminish their quality of life. Help us to build a better future for these Philadelphians!

The Philadelphia Earthship is the first Earthship built in a major U.S city, making it the first urban Earthship in America. [Location: 675 N 41st St, Philadelphia, PA 19104](#)

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www.earthship360.com

LOOK WHAT IS HAPPENING IN THE USA

From the Resilience newsletter

Hottest Year Ever Recorded + Collapsing Oil Prices = Broken Fossil fuel Economy

by [Gary Wockner](#), originally published by [EcoWatch](#) | FEB 2, 2016 *"I read the news today, oh boy."* —John Lennon

Two overlapping news stories in the past few weeks must focus our attention on the need to move away from fossil fuels as quickly as possible and to transition our global economy to a more just and resilient system, especially for the world's poor and vulnerable peoples.

First, it was widely reported that 2015 was the [hottest year](#) ever recorded in human history. Specifically, the global temperature was not just higher than ever, but it rose faster than ever and the 5-year period, 2011-2015, was also the hottest 5-years ever. [Climate change](#) is real, is happening right now and seems to be accelerating in speed and intensity with every passing year.



The fossil fuel economy is broken and is collapsing around us. Photo credit: Kristian Buss

Second, global oil prices continue to collapse, now below **\$30/barrel**. This sent world stock markets down and had a number of negative impacts on human rights issues around the world. A New York Times **article** last month reported the devastating impact that falling oil prices are having on poor and marginalized people in Russia. Oil is Russia's biggest export commodity, makes up more than 15 percent of the Gross Domestic Product and around 50 percent of its federal budget. As oil prices dropped, the Russian government began making cuts to social spending, focusing on cuts to the poorest people first. Retirees, teachers, factory workers—all have seen large cuts to their incomes and struggle to get by.

Near-disastrous news stories are also pouring out of other countries that export large amounts of oil. News from **Nigeria**, **Angola**, **Ecuador** and **Brazil** is describing serious economic problems, with cuts to social spending for poor people first in line to make up for government shortfalls from oil revenues. Venezuela is said to be teetering on international bankruptcy and default of its **\$120 billion** in foreign loans due to the collapse in oil prices. The Venezuelan government is nearly in chaos as **tens-of-thousands** of workers have been laid off, numerous multi-million dollar infrastructure projects have been delayed—including housing for the poor—and government spending on social programs has already been cut 24 percent with bigger slashes looming.



Alicia Cahuilla, vice president of the National Waorani Federation in Ecuador, speaks in Lima, Peru, in support of women's and environmental rights and against oil companies. Photo credit: Caroline Bennett

Further, in almost all of the exact same countries that are now suffering from the low oil prices, the exploration and extraction of oil has had—and continues to have—extraordinarily negative impacts on many of the same poor and indigenous people. When global oil prices were high, the march of oil companies was relentless across the rainforests of South America as well as the dry plains of Africa. And in both of those places, poor, rural and indigenous peoples' homelands were under assault by oil companies. Now that oil prices have plunged, oil drilling and production is still occurring, yet the economic system that helps support poor people is further collapsing.

Even worse, the world's indigenous, poor, rural and marginalized people have and will continue to suffer the brunt of climate change chaos as global temperatures increase. **Extreme weather events** such as hurricanes and flooding have wreaked havoc in the Philippines, in Haiti, as well as in New Orleans and New York over

the last decade. These events can compound for the most vulnerable people—as one simple statistic among dozens that could be reported, poor women are disproportionately impacted and are **14 times** more likely to die in climate change events.

Clearly, the fossil fuel economy is broken and is collapsing around us.

Paradoxically, in some cases, fossil fuel extraction and development is funded by international aid organizations in hopes of creating jobs and strengthening local economies in poorer countries. A recent **analysis by Oil Change International** indicated that the World Bank spent \$3.4 billion (U.S.) in 2014 funding various fossil fuel development schemes around the globe.

We see this type of World Bank development as the exact opposite of the direction international aid and philanthropy should go. It is creating a vicious cycle of poverty, climate change impacts and debt and is forcing a malicious addiction to a collapsing fossil fuel economy.

At **Global Greengrants Fund**, we are working with coalitions of groups and philanthropists where we take a dramatically different approach to international aid and granting. We aim to fund alternative solutions that help address underlying systemic problems and create systemic change. We want to help create economies that are more local and sustainable, that do not rely on fossil fuels extraction and that move the world away from a dependence on international economic cycles such as the rise and fall of oil prices.

In addition, this year Terry Odendah began a new role serving as co-chair of the **EDGE Funders Alliance** which is an international coalition of philanthropists working specifically to fund efforts that change the underlying system and move global economies in a more sustainable direction. EDGE Funders, as the name suggests, fund at the “edge”—to create global social change. Here are some examples of what EDGE funders focus on and provide grants for:

- We understand our work within a global context in which international policies as well as global economic interests and influences impact societies at all levels and we recognize the systemic nature of many of the economic, social and ecological challenges facing humanity.
- At Greengrants, we fund mostly grassroots work in local communities around environmental and social justice, so that people who are most affected have the tools to make change and amplify their voices. Other EDGE Funders do complementary work at the various levels of systemic social change.
- We make grants around sustainable economic and environmental development, rather than western-style economic growth and resource extraction.
- We help people to “do something” and “take action,” which can come in many forms, but here are two examples—public demonstrations against extraction and youth empowerment so that young people can speak directly to decision-makers.
- We promote “movement building” domestically and globally.”We fund to promote equality and diversity.
- Finally, we especially try to make grants that recognize the interconnectedness of the above items. We don’t just fund labor movements or environmental organizations or women’s empowerment programs, but rather try to find and fund the intersection of these activities. As just one example: By funding indigenous

women to sell sustainably extracted products, we are helping to empower women, develop an alternative economy and protect the ecosystem.

Rather than promote massive development schemes that can cause havoc to cultures, economies and the environment, we support creating a transition to a new economy and ecology that focuses on what we sometimes call the “resilience solution.” Resilience, in an increasingly climate-changed and unstable world, will likely come about for people, cultures and environments that are more diverse, decentralized, democratic and more efficient and egalitarian with their distribution of natural and economic resources.

Did you read the news today? Oh boy. It’s time to take action to change the system. The global fossil fuel economy not only is collapsing—it must collapse—so we can build a new, just and resilient economy to replace it.

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When will it happen in Australia?

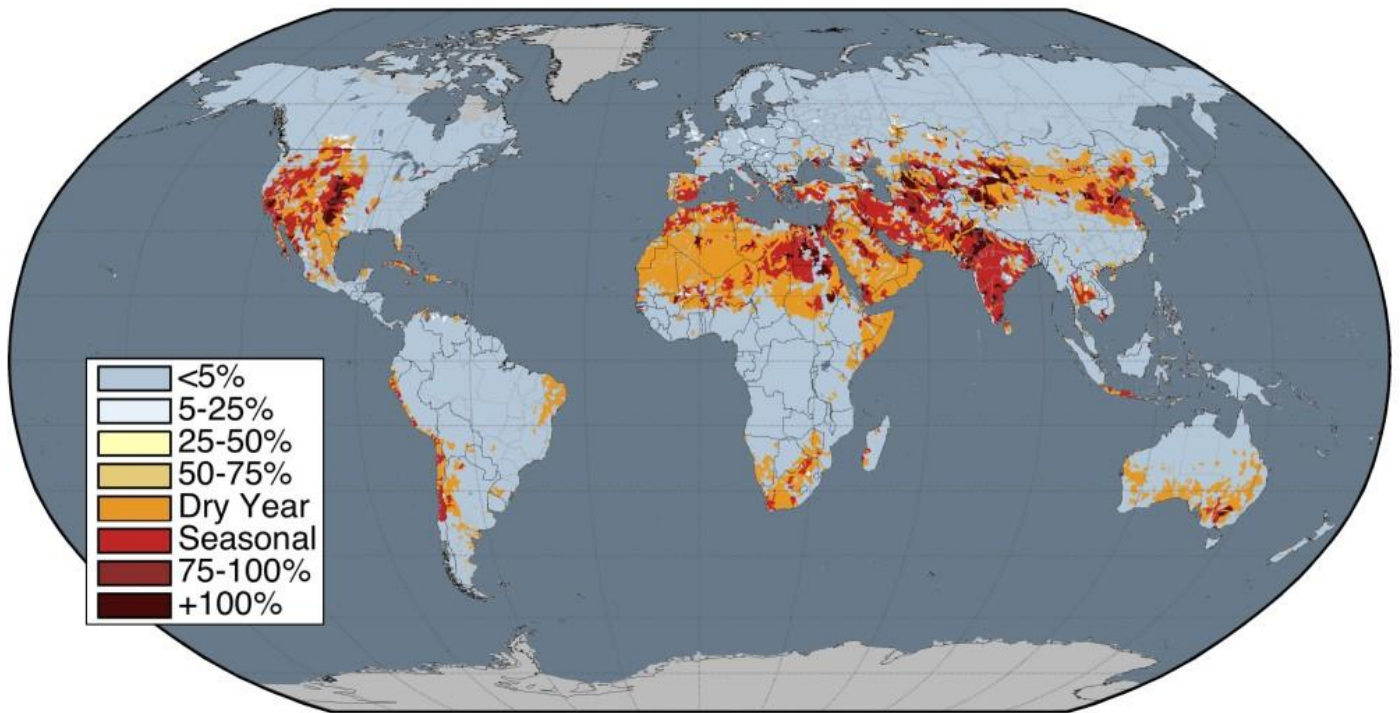
California Offshore Oil Fracking Permits Halted While Federal Government Performs Environmental Review

By Mike Gaworecki on Feb 04, 2016 04:26 am

The U.S. federal government will stop approving offshore oil fracking operations off California’s coast while it studies how damaging the practice is to the health of wildlife and the environment. See the rest at (<http://www.resilience.org/stories/2016-02-04/california-offshore-oil-fracking-permits-halted-while-federal-government-performs-environmental-review>)

Some good some bad News from around the world

Water Risks are Growing; Here's a Tool to Help Us Prepare



This map shows annual, seasonal and dry-year depletion for 15,091 watersheds worldwide. The inclusion of seasonal and dry-year depletion estimates increases by 15-fold the number of watersheds experiencing depletion of 75% or more. Source: Kate A. Brauman et al., in Elementa, January 20, 2016.

Earlier this month, the World Economic Forum in Davos, Switzerland, released its [annual risk assessment](#), which looks across the spectrum of threats to society and ranks them. This year, it declared water crises to be the top global risk to society over the next decade. Just behind water crises were the failure to adapt to climate change, extreme weather events, food crises and profound social instability. Together, these five threats constitute an interwoven risk landscape that has water shortages, in one way or another, at its core.

The Forum is not predisposed to emphasize environmental concerns. Terrorism, fiscal crises and the spread of infectious diseases are among the risks it considers and ranks. The Forum's members include heads of state, chief executive officers and civic leaders.

Water topped one of the risk categories in the 2015 assessment, as well.

If an alarm bell was needed to focus global attention on water security, it has rung.

Last week, a team of colleagues and I released a new tool to help planners and policy-makers better understand the geography and nature of water risks around the globe. Our work was [published in the journal Elementa: Science of the Anthropocene](#).

Our tool, though developed with some complex modeling, is represented by a very straightforward global map that depicts the depletion of water at a high degree of spatial resolution. (By "depletion," we mean the fraction of renewable surface water and groundwater available in a watershed that is consumed by human activities.) This tool differs from most others available in two important ways.

Whereas most scarcity maps examine trends at the scale of large watersheds – sometimes even as big as the entire Mississippi River basin, which drains 40 percent of the continental United States – our tool breaks the

picture down to much smaller sub-watersheds. This enables users to get a more detailed and accurate picture of where problems of shortage are likely to arise.

Second, instead of depicting water scarcity only as an annual average problem, it sketches out where seasonal and dry-year shortages can be expected. The inclusion of these periodic episodes of depletion increases by a factor of 15 the number of watersheds experiencing 75 percent depletion or more.

We found that in two-thirds of the world's river basins, water consumption remains within sustainable limits. But in the other third, water extractions are heavily depleting available supplies. In those areas, freshwater ecosystems and the species they support are likely in trouble, and shortages impacting farms, cities and businesses are more likely to occur.

Because growing crops requires a great deal of water, watersheds with extensive irrigated agriculture tend to be at higher than normal risk for shortages. Some 40 percent of the world's food comes from the 18 percent of cropland that is irrigated, so threats to irrigated agriculture can quickly translate into threats to global food security.

Our study characterizes 71% of world-irrigated area and 47% of large cities as experiencing at least periodic water shortage.

While no tool can serve as a crystal ball, this one helps remove some uncertainties by pinpointing areas at risk. This can help farmers, city planners, conservationists and businesses take steps to build more resilience and security in the face of prospective shortages.

It can highlight, for example, where it could make sense to institute "dry-year options," whereby a city might pay irrigators to improve irrigation efficiency in return for the water saved. Or it might help conservation groups target where water banks might be needed to secure flows for rivers and wetlands.

Kate Brauman, lead scientist of the Global Water Initiative at the [University of Minnesota's Institute on the Environment](#), led our study team. Martina Flörke and Marcus Malsy from the [Center for Environmental Systems Research](#) at the University of Kassel in Germany anchored the heavy-duty modeling work, using the [WaterGAP 3](#) global water resources model. Brian Richter, chief scientist at the global freshwater program of [The Nature Conservancy](#) and I completed the team of analysts and co-authors.

The map and water depletion data for all 15,091 watersheds are freely available at www.earthstat.org.

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From the Resilience newsletter

Once Unstoppable, Tar Sands Now Battered from All Sides

By Ed Struzik on Feb 01, 2016 05:35 am

Canada's tar sands industry is in crisis as oil prices plummet, pipeline projects are killed, and new governments in Alberta and Ottawa vow less reliance on this highly polluting energy source. Is this the beginning of the end for the tar sands juggernaut?

In the summer of 2014, when oil was selling for \$114 per barrel, Alberta's tar sands industry was still confidently standing by earlier predictions that it would nearly triple production by 2035. Companies such as Suncor, Statoil, Syncrude, Royal Dutch Shell, and Imperial Oil Ltd. were investing hundreds of billions of dollars in new projects to mine the thick, highly polluting bitumen. (for remainder of this article go to <http://www.resilience.org/stories/2016-02-01/once-unstoppable-tar-sands-now-battered-from-all-sides>)

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Permaculture Cairns

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If you have a Permaculture Design Certificate could you please complete the following survey.

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Permaculture Cairns Public Meetings - All Welcome Third Tuesday of month Feb to Nov (Second Tuesday Dec). Doors open 6pm, meeting starts at 6.30pm at: ARC Disability Centre, 92 Little Street, Manunda

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