

Permaculture Cairns Incorporated - Established July, 2007

Web Site: [www.permaculturecairns.org.au](http://www.permaculturecairns.org.au)



## Permaculture Cairns News

EMPOWERING COMMUNITIES WITH SUSTAINABLE SOLUTIONS

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

### August Meeting & Information Exchange Night

Tuesday 18th at 6pm for a 6.30pm start

Meeting Venue: ARC Disability Centre – 92 Little Street Manunda

**Members please bring a plate of finger food to share and a friend or two!**

**Financial Members are free, Non Members \$5 Why not join up - only \$10 for singles and \$15 for a household until 1<sup>st</sup> January 2016**

#### AGENDA

##### Welcome

**Upcoming workshops and event for this month and beyond  
Permaculture Principle Number 8, a practical explanation.**

**This month we have two Guest Speakers.**

**Guest Speaker: Jeremy Winer of Weedtechnics** will discuss research into the benefits and limitations of various weed management practices, based on scientific research from around the globe and share his success in engaging Councils around Australia in adopting the Saturated Steam Wood Control Technology that he has developed with a background of 30 years of practical experience in implementing integrated holistic approach to weed management . Check out the website for a great one minute introductory video [www.weedtechnics.com](http://www.weedtechnics.com) .

#### **Guest Speaker: Alan Louis CPEng RPEQ, Senior Engineer Distributed Energy, Ergon Energy.**

Alan graduated from James Cook University in 2007 with a Bachelor of Electrical Engineering (first class honours) and Bachelor of Science (Mathematics). He joined Ergon Energy through the graduate program and has worked in a number of core power engineering fields such as distribution planning, network protection, control systems, test and commissioning, and line field services. He currently works as a senior engineer in the technology development workgroup where he is responsible for the investigation of new technologies to benefit both utilities and customers. His experience relates to the technical aspects of energy storage, inverter systems and renewable energy, power system modelling, and lithium ion technologies. In 2012, he was awarded the Graduate Electrical Power Engineer of the Year from Engineers Australia.

Alan will talk about how energy storage technology has been advancing at a rapid pace, and alongside renewable energy such as solar PV, it presents a real opportunity for customer to significantly reduce electricity costs. While energy storage presents many challenges for utilities, it also presents opportunities to better improve our network and work together with customers to achieve real energy sustainability. Utilities such as Ergon Energy have been investigating energy storage technology for a number of years to better understand the technology and how it can benefit the electricity network.

#### **Then- Book of the Month, Plant of the Month, Tool of the Month, Gardening Tip of the Month**

8.15 we break for a cuppa and nibbles and a chance to network with like minded people.

Check out the books in our Members Library - All finished and on the way home by 9.00pm

## **Last month Dr Barb Ford gave us a talk about her holiday on a Permaculture Farm in Kenya**

Barb Ford while working with Red Cross in South Sudan for a year, had three weeks holiday. Instead of coming home she spent the three weeks on a Permaculture Demonstration Farm in Kenya. Her photos showed how they have adapted to growing in a dry climate with no irrigation. Water supplies are carted by donkey all day to a central point for distribution. Barb explained with photos how the farmers had incorporated alley cropping between rows of fruit trees to enhance the environment for annual crops by providing shade, protection from weeds and increasing moisture. Barb talked about how one lady had a full time job plus 3 children, 4 goats, a very large garden, and a large family to cook and care for each day. She said she didn't mind how hard she worked as long as she could provide enough money to send her children to school. Are we spoilt in this country???? Do we appreciate our education system enough????

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## **Permaculture Principle No. 8 – Integrate rather than segregate**

*Many hands make light work*

**By putting the right things in the right place, relationships develop between them and they support each other.**

This icon represents a group of people from a bird's-eye view, holding hands in a circle together. The space in the centre could represent "the whole being greater than the sum of the parts". The proverb "many hands make light work" suggests that when we work together the job becomes easier.

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## **A message from the Permaculture Cairns Management Committee**

The 15<sup>th</sup> September 2015 meeting will begin with a Special Resolution put to a General Meeting for members to cast a vote on.

A Special Resolution will be put to the members to amend the rules of the Constitution of Permaculture Cairns. The current rules state in

### **"Classes of membership - Description of Membership - Membership Limitations – Class of Member"**

Ordinary Unlimited - This refers to the voting rights and election to committees.

2. Election to Management Committee is subject to successful completion of a recognised Permaculture Design Certificate Course.

And

Family Unlimited – This refers to the voting rights and election to committees

2. Election to management committee is subject to successful completion of a recognized Permaculture Design Certificate Course"

The amendment:- "Delete all the requirements that membership of the management committee requires members to have successfully completed a recognized Permaculture Design Certificate Course.

Explanation for the amendment :

Under the present rules, we would find it difficult to form a Management Committee of all Permaculture Design Certificate Course holders.

The management committee intends to add a clause to our Policy document to state that at least one member of the management committee must have successfully completed a recognised Permaculture Design Certificate Course and all members of the management committee must support the objects of the Association.

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## **LOCAL WORKSHOPS AND EVENTS**

### **Cairns Seed Savers Meeting – 16<sup>th</sup> August 2015**

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

Where: Carol's Place – 14 Marsh Street, Earlville

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 and demo by Carol – all you need to know about practical home seed saving  
12 – 12.30 Enjoy a shared lunch  
12.30 – 1pm Tour of Carol's very productive garden.

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### **Biodynamics FNQ Workshop-Farm Visit – Sunday 16<sup>th</sup> August**

Biodynamics and beef cattle, pasture management in the wet tropics, animal health and homeopathy – Steve and Odette Plozza at Butchers Creek 10am to 4pm

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### **Public forum - Weed Management in public spaces – 19<sup>th</sup> August**

Cominos House cnr Little and Greenslopes Street - 6.30 for 7pm start

Speakers: Andreu, President of IFOAM – Organics International  
The Myths of Safe Pesticides

Deborah from Frog Safe Inc – To spray or not to spray  
that is the Frog question

Jeremy Winer – Weedtechnics –  
The latest developments in non-chemical weed control

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### **Open Day At Cairns Hinterland Steiner School 22nd August 10am – 4pm**

Craft activities, fun and games, classroom displays, food and refreshments, Music and entertainment. 46 Boyles Rd, Kuranda. 4093 8809 [www.chss.qld.edu.au](http://www.chss.qld.edu.au)

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### **Weed Spotter Network Training – Cairns Thursday 27 August 2pm – 4pm**

James Cook University Room E2113

Stephen McKenna and Dr Melinda Laidlaw, Senior Ecologist, Weed Spotters Network Queensland Coordinator will be conducting a 2 hour free training session on weed ecology, Class 1 weed identification and plant collecting/preserving techniques. All are very welcome to attend. It will also be a good opportunity for everyone to have a chat about surveillance and early detection.

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## SEPTEMBER EVENTS

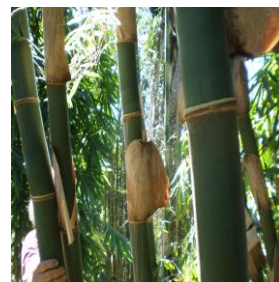
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### BAMBOO WORKSHOPS

#### RAVENSHOE

THE CRAFT SAT & SUN SEPT 12<sup>TH</sup> & 13<sup>TH</sup>

THE CRAFT: Working with bamboo



This 2 day workshop covers the basic skills required to make bamboo joints, to split and weave bamboo. Both high and low technology tools and techniques will be used.

Day 1: learn bamboo pole selection and anatomy, bamboo tools and their uses, the basic joints, lashings and how to split bamboo for weaving or slats.

Day 2: participate in a number of projects, practicing the essential skills while creating a range of craft items.

Where: Bamboo Solutions, 1 Ascham St., Ravenshoe, Far North Queensland

When: Saturday 12th and Sunday 13th September 9am to 5pm

Cost: \$200

Bring: Hat, good footwear, gloves, notepad, lunch to share and a smile.

Please book with : [j.hartmann@ozemail.com.au](mailto:j.hartmann@ozemail.com.au) 0740977645

[www.bamboosolutionsfnq.com](http://www.bamboosolutionsfnq.com)

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### Kanjini Co-Op Annual Gathering – Mareeba – 18-20 September

The 2015 Kanjini Co-Op Annual Gathering will be from Friday 18th to Sunday 20th September 2015. Please mark it in your calendars so you can come along and meet us and share in our dream for three days and two nights or you can come for part of the weekend or even just a few hours if your life is too busy for a short holiday! The intent of the gathering is to invite everyone in the wider community, who would support our vision for this land in any way, to come and experience this amazing property first-hand and share a weekend with old and new friends.

We'd love you to come and camp on the property; meet the members; explore the property by bush-walking and/or guided tours; participate in workshops or put your own on the white board; swim in the 20 acre lake or jump into the refreshing Emerald Creek; check out some of the new camp grounds; share your ideas and thus help shape the common dream; ask us any questions; sit around the fire and look at the moon and the stars; listen to or make live music; celebrate and meditate; and have a great time with wonderful people on our magic piece of paradise.

If you have a minute, please reply to this email with your input on:

-Is there anything you would like to see at the gathering this year.

-Was there things you would change from last year's gathering.

-If you are a teacher or musician or have something you would be willing to contribute (for example a small presentation or workshop), we would love to create space for these kinds of events too, so let us know what you might like to do so we can help get what you need.

-would you like to help with set up, planning, getting the word out or any kind of volunteer work you can think of.



We are growing this gathering and hope to make new improvements and more activities each year and we need your help to do so.

**Please mark Friday the 18th to Sunday the 20th of September 2015 on your calendars and RSVP us your attendance as soon as possible** so we can get an idea of numbers and can plan for sufficient facilities.

We will send more details about what will be happening and what you'll need to bring and directions etc closer to the event.

## **NEWS ITEMS FROM HOME AND AROUND THE WORLD**

### **Bomb-Sniffing Rats Are Saving Lives In Africa And They Look Cute As Hell While doing it**

Africa's chock full of landmines from leftover conflicts and unfortunately, the mines are still active and very dangerous. But there's a weapon bomb squads have in their arsenal that's making finding and deactivating these mines easier: rats.

The rats are being trained by APOPO, a Dutch Anti-Personnel detection unit that teaches the rodents to sniff out bombs.



"Yeah I found all these, how many mines did you find, dude? Oh, zero?" Because the rats have an excellent sense of smell and are super intelligent, conditioning them to identify explosive materials is easy. The program has been in effect since 2000. Since that time, the rats have sniffed out over 9,000 landmines and bombs and thousands of buried weapons and ammunition stashes in Tanzania and Mozambique alone. Master Splinter would be proud.

# Australia's Post-2020 Emissions Reduction Target

Joint media release

- The Hon Tony Abbott MP, Prime Minister
- The Hon Julie Bishop MP, Minister for Foreign Affairs
- The Hon Greg Hunt MP, Minister for the Environment

11 August 2015

Australia will reduce greenhouse gas emissions so they are 26-28 per cent below 2005 levels by 2030.

This is a responsible and achievable target. It is comparable to the targets of other developed countries and allows our economy and jobs to grow strongly.

The target builds on Australia's excellent record. We met and beat our first Kyoto target and expect to do the same in 2020 through the Government's Direct Action plan.

Australia is making a strong and credible contribution to the international effort to tackle climate change.

Our emissions intensity and emissions per person will fall further than other developed economies.

Australia's emissions per person will decline by at least 50 per cent between 2005 and 2030, while emissions per unit of GDP will fall by 64 per cent.

The Government will meet Australia's 2030 target through policies built on the successful Direct Action plan, in particular the Emissions Reduction Fund and its Safeguard Mechanism.

The Emissions Reduction Fund is already achieving significant emissions reductions – with 47 million tonnes contracted at less than \$14 per tonne in the first auction alone.

We are on our way to planting 20 million trees by 2020 and have rolled out more than 350 Green Army projects around the country.

There are many additional ways we can reduce emissions, while saving businesses and households money and lifting productivity.

We will prioritise a National Energy Productivity Plan, working with State and Territory governments to improve energy productivity by up to 40 per cent by 2030.

We will develop a National Climate Resilience and Adaptation Strategy.

The Government will review Australia's emissions reduction policies in detail in 2017-18, in close consultation with businesses and the community.

We are committed to tackling climate change without a carbon tax or an emissions trading scheme that will hike up power bills for families, pensioners and businesses.

At 26-28 per cent, Australia's target gets the right balance between our economic and environmental responsibilities.

We have a strong and credible target to take to Paris and Australia will work with our international partners to achieve a strong agreement at the United Nations Climate Change Conference in December.

Presentation: [Australia's Post-2020 Emissions Reduction Target \[PDF 948 KB\]](#)

## Other News Releases from our Government Departments

TITLE: New investment to expand gas industry research

PORTFOLIO: Industry

URL: <http://minister.industry.gov.au/ministers/macfarlane/media-releases/new-investment-expand-gas-industry-research>

SNIPPET: The Australian Government and NSW Government will invest a total of \$3 million in a strategic research alliance with CSIRO and industry to expand research on the social and environmental impacts of the onshore gas industry. GISERA's NSW specific research will empower communities to assess and form their own views on the development of onshore gas based on independent scientific information that is relevant to community concerns. GISERA will ensure that debate on the establishment of coal seam gas in New South Wales is based on science and facts, not misconceptions.

TITLE: Have your say on the future of aged care advocacy services | Senator the Hon Mitch Fifield

PORTFOLIO: Social Services

URL: <http://mitchfifield.dss.gov.au/media-releases/have-your-say-on-the-future-of-aged-care-advocacy-services>

SNIPPET: The Australian Government is calling for feedback on an options paper released as part of its review of Commonwealth Aged Care Advocacy Services. Advocacy services provide free, confidential and independent support to older Australians, their families and carers about their rights and responsibilities when accessing aged care services in the home, residential facilities and in the community. The options paper outlines key elements that could be adopted to create an integrated advocacy approach across all Commonwealth-funded aged care services.

## AUSSIE DIETS FAIL THE TEST

### From CSIRO 10 August 2015

Australian diets aren't making the grade with an addiction to junk food largely to blame, according to findings from the CSIRO Healthy Diet Score Survey.

The country's diet quality was given a rating of 61 on a 100-point scale when assessed using the CSIRO Healthy Diet Score - a scientifically validated survey which assesses people's diet quality against the Australian Dietary Guidelines.

Discretionary food, or junk food, intake was found to be three-times higher than the recommended daily limit. Based on the survey results, Australians eat the equivalent of 32kg of chocolate each year.

More than 40,000 people took part in the survey, which evaluated a person's diet based on variety, frequency and quantity of the essential food groups as well as individual attributes such as age and gender.

According to Professor Manny Noakes, CSIRO Research Director for Nutrition and Health and the co-author of the *CSIRO Total Wellbeing Diet*, the results were concerning.

"The scores were fairly unflattering across all respondents," Professor Noakes said.

"If we were handing out report cards for diet quality - Australia would only get a C.

"While many people scored highly in categories such as water intake and the variety of foods consumed, there is certainly lots of room for improvement in other areas."

Discretionary or junk foods are foods and drinks that are high in sugar, saturated fats and/or alcohol and low in essential nutrients.

Of the survey responders, the average score received for the discretionary foods category was only 37/100.

"What we're finding is people are having larger portions of junk food, more often," Professor Noakes said.

"This type of food is no longer just an indulgence, its become mainstream and Australians are eating it each and every day.

"In order to improve your diet quality, people need to cut back on the consumption of junk food, and start to focus on eating smaller portions.

"They also need to be more mindful of every bite they take by eating more slowly and consciously."

How do you measure up? The CSIRO Healthy Diet Score is a free 15-minute online assessment which evaluates diet quality and identifies areas of improvement.

"The online assessment provides Australians with a simple and trusted way of self-assessing the quality of their diet and how they compare to others of the same age, gender, generation, profession as well as people from the same State and across the country," Professor Noakes said.

"We would encourage people to take the test regularly to ensure they are improving their eating behaviour and overall health and wellbeing."

The online assessment can be completed at: [www.csirodietscore.com](http://www.csirodietscore.com)

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## Adani court case leaves the climate change question unanswered

August 5, 2015 5.25pm AEST

From the Conversation

The Federal Court has [overturned](#) the federal environmental approval of Adani's A\$16.5 billion coalmine project in central Queensland.

The court [ordered](#) the approval of the Carmichael mine licence in the Galilee Basin to be set aside, meaning that Adani will have to re-apply for the coal licence and the federal environment minister Greg Hunt will have to re-approve the application.

Sue Higginson, principal solicitor of the Environment Defenders Office NSW, [said](#) that the decision of the Federal Court was "based on a failure by the minister to have regard to the conservation advices for two federally listed vulnerable species" – the [yakka skink](#) and the [ornamental snake](#). The lawsuit also alleged a failure "to consider global greenhouse emissions from the burning of the coal".

The Carmichael mine received [federal environmental approval](#) in July 2014.

Greenpeace has [estimated](#) that the mine, operating at full capacity, would extract enough coal to generate 128 million tonnes of carbon dioxide emissions every year, equivalent to about a quarter of Australia's current total emissions from fuel combustion.

So what does the order mean for the Carmichael mine?

### A skink and a snake

As I've [explained previously](#) on The Conversation, the Mackay Conservation Group brought an action to the Federal Court alleging that minister Hunt failed to take into account considerations set out in the Environment Protection and Biodiversity Conservation (EPBC) Act.

The court found that failure of the minister to take account of two endangered species specifically listed in the EPBC Act – the yakka skink and the ornamental snake – was sufficient for it to be overruled.



In reviewing the endangered species the minister was not presented with the correct conservation documents which meant that any conditions that were included in the approval may have been insufficient to satisfy the requirements of the EPBC Act.

One of the specific aims of the EPBC Act is to ensure that endangered species are properly protected and the endangered species list is specifically identified as a matter of national environmental significance. There are also concerns that the mine will affect other vulnerable species - black-throated finch - and ancient groundwater springs.

## Ignoring greenhouse gases

However, one of the other considerations raised by the Mackay conservation group – the greenhouse gas emissions released from burning extracted coal overseas – was left unresolved by the court.

The EPBC Act specifically requires the principles of ecological sustainable development to be taken into account when assessing matters of national environmental significance. Whether this includes consideration of the climate change implications for the Great Barrier Reef National Park that may flow from the increase in greenhouse gas emissions from such a coal project was not resolved.

The environment minister is required under the EPBC Act to give regard to the social and economic impacts of issuing a coal licence in such an environmentally significant area. In making this assessment, the minister is required to consider the principles of ecologically sustainable development.

This means that the minister must evaluate not only how the land will be impacted, but also broader issues relevant to intergenerational equity. The EPBC Act also specifically mandates that the precautionary principle be taken into account in making decisions and approvals in areas of national environmental significance, like the Great Barrier Reef National Park.

[Previous decisions](#) of the Federal Court in this regard have held the impact of greenhouse gas emissions from burning coal does come within the scope of the EPBC Act and should be assessed, despite the fact that emissions are difficult to measure and that climate change is caused by a range of different contributors. The focus is the extent of the greenhouse gas emissions rather than the location where they are emitted.

Climate change is a global rather than a domestic concern. The impact of climate change is one of the biggest threats to the preservation of the Great Barrier Reef.

A “statement of reasons” issued by minister Hunt to the Mackay Conservation Group doesn’t refer to the impact of greenhouse gas emissions from burning the coal outside Australia. It appears the minister felt that the direct emissions were properly controlled by strategies proposed in accordance with the National Greenhouse Gas Reporting requirements.

## What does it mean for Adani?

The decision by the Federal Court to overrule the licence means that the Federal Court felt that the exercise of power by the Federal Minister in issuing the coal licence to Adani was improper.

For Adani to continue with its coal project it will need to re-apply for the coal licence and the Federal Minister must re-approve the licence taking proper account of the mandated relevant considerations set out within the EPBC Act.

This is likely to involve a more detailed evaluation as to how the coal project, should it proceed, will impact upon the federally listed endangered species and to include robust conditions regarding the future management of those species.

Hopefully, any future assessment will also involve a more detailed evaluation of the impact of greenhouse gas emissions at both the global and domestic level. This is an increasingly crucial concern given the importance of mitigating fossil fuel emissions in response to climate change imperatives.

**The Trans Pacific Partnership and Free Trade Talks raised concerns around the world – so many that they couldn't agree. Have a read to get some ideas of the problems raised**

Some concern in Hawaii over the so called Free Trade Agreement being negotiated at present on Maui, Hawaii

From <http://www.civilbeat.com/2015/07/tpp-a-new-wave-of-colonialism/>

July 24, 2015·By [Andrea Brower](#)

Negotiators of the [Trans-Pacific Partnership](#) began meeting on [Maui](#) today, where they are [hoping to conclude a deal](#) next week. The massive twelve-country [treaty](#) has been in the works for six years, secretive to the public but advised by [500 corporations](#).

Making no attempt to [feign democracy](#), citizens have had to rely on [leaked draft texts](#) to get just a partial glimpse of what is in the extensive agreement. Once the negotiators have come to a deal, democratic deliberation will be further subverted by “[fast-tracking](#)” the TPP, putting it to Congress for a yes/no vote with no amendments and limited debate. Depending on what happens in Hawaii this week, a Congressional vote could happen as soon as Nov. 1.

The TPP is one of three major international treaties — also including the [TTIP Atlantic-version](#) and [TISA services agreement](#) — currently under negotiation. These treaties aim to lock-in policies that make it easier for the most dominant corporations and banks to rake in profits, and harder for people and democratic governments to decide their own fate. It amounts to *more* regulation and [bureaucracy](#) facilitating the profits and [property rights](#) of the mega-rich, and less protections for workers, indigenous rights, farmers, health, the environment, and smaller businesses.

Like [NAFTA](#) and other ([misleadingly described](#)) “free-trade agreements,” the TPP would pit workers of different countries against one another and [drive down wages](#) and living standards. [Richard Trumka](#), President of AFL-CIO, the largest federation of unions in the United States, recently told the [Guardian](#) that never before have unions been so unified in opposing something. Describing general effects on U.S. jobs and the economy, Trumka said:

“It doesn’t affect just people in manufacturing...It affects everybody, including people in services. When high wages are driven down in manufacturing and elsewhere, it affects everyone in the community. When a manufacturing plant moves out — and we’ve lost tens of thousands of them since 2000 — it affects everybody. It hurts the wage base and tax base.”

Leaked texts from the TPP indicate that not only does it extend the NAFTA-like regime, but it goes well beyond it. Investor rights provisions in the TPP empower corporations to bypass domestic courts and sue governments in international tribunals for imagined losses of “expected profits” — for example, over [gold still in the ground](#). Currently these “investor-state” systems are being used by corporations to sue over denial of mining permits, pollution cleanup requirements, minimum wage law, climate regulations, [cigarette health labels](#), and a [long list](#) of other public interest policies. Hundreds of cases have been launched in the past several years, and an [entire industry](#) has popped up around contriving potential lawsuits. With investors entitled to demand [unlimited sums](#) of taxpayer money, it is a [lucrative new frontier](#) for stealing wealth from the 99.9 percent (and especially the [world’s poorest](#)).

For Hawaii, aspects of the TPP might be likened to an international level PLDC—on steroids. Corporate profit protections would be privileged over Hawaii’s unique protections for conservation lands and publicly managed resources. Development companies would acquire strengthened legal rights to maximize their private investments using public resources. These legal rights can create a “[chilling effect](#),” whereby governments hesitate to pass regulations that might interrupt or irritate private investors.

All of this is of particular concern in regards to ongoing violations of Kānaka rights to manage and access resources and sacred places, and potentially of concern to unresolved seized [Crown and Government](#) land

issues. Indigenous communities globally are calling the TPP / TTIP a [new wave of colonization](#)—treaties being made without their participation or consent, but with extensive impacts on their lands and the [appropriation and privatization](#) of their cultures and knowledges. It should not be ignored that TPP negotiations are being “hosted” by the U.S. in Hawaii, amidst de-colonial and de-occupation struggles.

Potential impacts of the TPP are wide-ranging, and rattling down a list risks sounding alarmist. But perhaps it is far past time to sound the alarm. Just a few of many additional points of concern include: [widening inequality](#), [rising cost of medicine](#), the [undermining of local food production and security](#), [exploitation of Oceania resources](#), the [lowering of pesticide regulations](#), and [suspended action on climate change](#). While seemingly disparate, these things are tied together by an underlying agenda to extend the profits, powers, privatization rights, markets and speculative capacities of the world’s largest corporations and banks, while shredding what remains of the social safety net and public protections.

These aren’t just matters of “corporate greed” (though that is part)—they are the drives of a system that is structured by compulsive commodification and profit maximization. In recent decades, neoliberal ideology has imposed extremes of this capitalist logic. While it comes cloaked in rhetoric of freedom, in truth all that comes “free” are the profits of those with the power to enclose the commons, speculate on non-existent abstractions (wreaking [hunger](#) and homelessness), and sue citizens for attempting to govern their own lives.

The decades-long corporate power grab and assault on people, democracy and earth also has a counter—the global movement of movements that is rising to make a fairer, more ecologically sane, and more cooperative and compassionate global future. What brings us together is our love for the planet, our respect for and responsibility to one another, and our belief that a better world is possible. While today many of us focus on stopping the TPP, these efforts are about the equality, democracy, human solidarity, justice, and true freedom that we seek to build.

Organizers and movements on Maui, in solidarity with people around the world, have called for a [“convergence by land and sea to stop the TPP”](#) on July 29 in Lahaina, where negotiations are taking place. Organizer [Trinette Furtado](#) says that all are invited that afternoon to a collective blowing of the conch shell: “The conch shell (or pū, in ‘ōlelo Hawai’i) was included because it calls for a cessation of time; of people. Because it demands attention and asks all to bear witness. We are sounding a call to attention; a call to stand and join together.”

For those that choose to visit the TPP negotiations, please be very respectful of place, take out everything you bring in, and use busses and parking shuttles if possible. Kama‘aina of Lahaina did not invite the TPP negotiations, nor should they have to deal with any kind of pilikia or ‘ōpala left behind.

In line with the Hawaiian wisdom [“I ka wā ma mua, ka wā ma hope”](#) (the future is in the past), it is worth recalling that July 31 also marks [Lā Ho‘iho‘i Ea](#), which was celebrated as Hawaiian national independence during much of the 19th century. On this “Restoration day” in 1843, after the islands were temporarily claimed by a rogue British captain, Hawaiian emissaries secured sovereignty and Kamehameha III famously proclaimed, “ua mau ke ea o ka ‘āina i ka pono”—“the sovereignty of the land continues through justice and proper acts” (translation by [Noelani Goodyear-Ka‘opua](#) in [A Nation Rising](#)).

Grounded in knowledge of histories past, we might ask what history is being made today, and how we will participate in shaping the future.

## And there is more concern about the Free Trade Agreement in El Salvador

### Part of the article “gold still in the ground” example of the treaty

A multinational mining company has been accused of launching "a direct assault on democratic governance" by suing [El Salvador](#) for more than US\$300m (£179m) in compensation, after the tiny Central American country refused to allow it to dig for gold amid growing opposition to the exploitation of its mineral wealth.

More than 300 NGOs, trade unions and civil society groups have signed a [strongly worded letter](#) accusing the Canada-based company Pacific Rim of using a little-known international tribunal to "subvert a democratic nationwide debate over mining and environmental health".

Pacific Rim, now owned by [OceanaGold](#), a Canadian-Australian firm, applied in 2004 for a permit to start operations at its El Dorado mine in the northern province of Cabañas.

The company seeks \$301m from El Salvador in a [protracted investment dispute that began in 2009](#). Pacific Rim claims El Salvador violated its own investment law by not issuing it a permit to dig for gold at the El Dorado mine.

But El Salvador argues that the company not only lacked environmental permissions for the project, but that it did not own, or have rights to, much of the land covered by its concession request, and did not submit a final feasibility study for the mining operation.

In addition to its dispute with the government, Pacific Rim has been challenged by community activists who say the El Dorado project could have catastrophic consequences for local water supplies and the Rio Lempa, a river on which much of the Salvadoran population depends.

"It's essential to defend every drop of water," said Hector Barrios, a 40-year-old anti-mining activist in Cabañas. "The struggle here is in defence of life, in defence of water. That's why we are in conflict with mining companies."

The Pacific Rim dispute is seen by many as a landmark case, because of the costs that could be imposed on the country and the precedent it could set for other companies looking to mount cases against the government.

"There are so many permits on standby right now, so there is fear that these companies will follow the lead of Pacific Rim," said Yanira Cortez, deputy state attorney for human rights. "These tribunals, this type of arbitration ... puts El Salvador in a dangerous situation because it means that investment is more important than the population and the environment."

Activists say the case also has wider implications. "[This case] demonstrates what happens when a poor country takes a decision and that is challenged by rules that privilege investor rights," said Manuel Pérez-Rocha at the [Institute for Policy Studies](#) (IPS) in Washington.

Known by some as the land of volcanoes, El Salvador is highly vulnerable to environmental threats and natural disasters. It is also one of the most densely populated countries in the world, with [304 people](#) per sq km in 2011. Estimates suggest that El Salvador is the second most deforested country in the Americas after Haiti, and that 90% of surface water is contaminated, triggering fears of a growing water crisis.

The case comes as a raft of free trade agreements are being considered worldwide, with the role of investor-state arbitration considered a key debate around the proposed Trans-Pacific Partnership and Transatlantic Trade and Investment Partnership.

## And more concerns over the free trade agreement

### Owning Food: In Search of a Common Good

From <http://www.resilience.org/stories/2015-07-29/owning-food-in-search-of-a-common-good> 30/7/15

by [Sophie Laggan](#), originally published by [Sustainable Food Trust](#)

Understanding property rights helps to explain the structural problems in our economic system and how they relate to the management of resources. For a sustainable food system, this knowledge is paramount.

When a farmer purchases land, the land becomes his or her private property. This land can then be used as the farmer deems appropriate, subject to laws and the farmer's own cultural beliefs and social values. The resources this land produces – in the case of farming, mainly food – are treated as private commodities that can be bought and sold in the market place.

In this scenario, everything seems fairly straightforward. However, our capitalist economic system of supply and demand to increase profit or utility complicates matters. For instance, some companies patent seeds that they sell to the farmer. Patents protect the use of seeds by designating ownership: the seed becomes property of the company. This prevents people from using the seed without permission and payment. The agro-industrial food system starts with private seed ownership by companies, with most farmers buying seed instead of saving their own seed. Any infringement of this may lead to a lawsuit and economic repercussion. Today just six seed giants control [75%](#) of seed and pesticide sales and related research and development.

### Who's governing whom?

Typically, food grown by the farmer is then processed, packaged and distributed by a handful of big companies and sold at a supermarket. In Britain most food is sold through Tesco, Asda, Sainsbury's or Morrisons. Governing this whole process are lucrative bilateral, regional and mega-[trade deals](#) that determine who sells what, to whom and by whose rules. Trade deals relating to food, [such as the TTIP which is currently being negotiated](#), have become so powerful that they are taking over the role of government in regulating markets and the exchange of property.

### Profit over people and planet

As a private resource, food is subject to the control of its owner. For agribusinesses that are mostly concerned with profit, the drive is to increase the efficiency and productivity of food production – more profit with fewer inputs. The [green revolution](#) undoubtedly improved yields for farmers in the short- to medium-term, but we are now seeing a decline in soil health and bio-cultural diversity as a result of the chemical inputs into farming and the more exploitative rotations instituted by the revolution.

Profits also drive food manufacturers to increase efficiency and economies of scale. 'Premiumisation' of products, such as adding protein or vitamins to foodstuffs, adds value to products with little extra input, or, as is more often the case, [allows companies to swap expensive ingredients for cheaper ones](#). Companies are always thinking of novel ways to add value to their products to retain competitive advantage and increase profits. Companies that cannot keep pace are driven out of the market.

The supermarkets are also privy to these tactics. The current supermarket price war and the rising popularity of discount chains has driven down prices at the expense of farmers' production costs. Alternative brands such as Lidl and Aldi are pushing competitors into privatising parts of their production process. Competition



has become so tough that Nestlé, one of the 'Big 10' global food and drinks companies, has gone so far as to try and trademark the distinctive shape of its [Kit Kat](#). Colours, shapes and even sounds are made private property in order to maximise profit.

This could be seen as simply healthy competition, but in reality it leads to the marginalisation of small-scale producers, food companies and retailers. For instance, supermarkets impose quotas on farmers to fulfil their demand for a crop and then reject produce that doesn't meet their cosmetic standards. Farms have to expand as quotas increase in order to deal with the amount of food that will inevitably be rejected. The rigours of this make it difficult for smaller-scale farmers and food producers to compete. This, inevitably, reduces the diversity of food producers in the supply chain, leaving mainly large-scale farmers and producers who have the capacity to conform to the rules and regulations of their buyers.

As a result, we find ourselves with a predominance of multinational food companies producing monocultural crops on a vast scale. Because these companies are operating within the wider sphere of the global commodities market, the whole system is vulnerable to global price shocks – as evidenced in the [2008 food crisis](#) – and food security is weakened around the world.

## Money puts food on the table

What is forgotten in all this is that healthy and nutritious food should be considered a human right. And yet it is unaffordable and inaccessible to millions of people. In many parts of the world, food is grown exclusively for export, depriving local citizens of the right to eat. Food security becomes dependent on aid and trade, as the last remaining parcels of land are bought up or simply appropriated in the global '[land grab](#)' phenomenon.

We are often told that we need to produce more food to feed the 9 billion people the population is predicted to grow to by 2050. However, Ulrich Hoffman, head of the Trade and Sustainable Development Section at the secretariat of the United Nations Conference on Trade and Development, stresses that our [neoliberal economic values](#) mask the fact that countries have more than enough food to feed themselves. The problem is not with quantity but with an agenda focused on increased trade and development, which means food is moved around the world according to market prices. According to Hoffman:

*Essential elements of a truly sustainable agricultural production system, such as diversified production, functional use of biodiversity, closed local nutrient cycles, low external-input and energy dependence, were undermined or jeopardised [in the recent wave of trade liberalisation agreements...] It was also ignored that small-scale farmers, not export-orientated and globally focused large-scale producers, provide the bulk of food [to local people].*

## Food as a commons

So, what is the alternative to the corporate food system that we are currently locked into? The concept of food as a commons – a shared resource produced on 'common' land – offers a way forward out of privatisation. It suggests that food resources can be commonly pooled together, managed by a group of people and collectively owned without the need to privatise.

[Neoclassical economics](#) – the dominant thinking in mainstream economic theory today – views everyone as self-interested individuals competing in a market determined by supply and demand. As a result, some economists believe that if we manage our own resources it will lead to a '[tragedy of the commons](#)'.

However, cooperation and altruism are possible. Societies can indeed build trust and develop informal rules

and norms to manage the shared commons of food and other resources. The US political scientist [Elinor Ostrom was awarded a Nobel Prize](#) for evidencing this in many societies around the world. The idea of food as a commons places people's welfare at the forefront of food economics by incorporating justice, equality and environmental stewardship.

[Feed Bristol](#) is a project that provides one example of how food as a commons works. The five-acre urban farm is managed by a group of volunteers and a few full-time staff. The volunteers are largely recovering from drug and alcohol addiction and use the site as a way to reconnect with nature, learn valuable skills and meet new people. The project successfully produces food using organic principles and shares the surplus among volunteers. They also plant local varieties and wildflowers to encourage pollination and offer courses and other learning opportunities for anyone who comes to visit.

Since Feed Bristol began in 2012, Project Manager Matt Cracknell says the social return on investment has been £6.7 million as of 2014. The project does not accrue profits nor does it overexploit the land; it has been conceived holistically to bring multiple benefits with minimal technological input. It is connected to Sims Hill Shared Harvest, a community supported agriculture project that delivers free or subsidised vegetable boxes to households in exchange for work. By using people power there is less need for machinery, while the financial barriers of eating organic food are reduced.

## **Towards food sovereignty**

Food sovereignty explicitly emphasises that ownership of food should belong to the community that is producing it – such as in the case of Feed Bristol. Not only does this shorten supply chains, it also supports the local economy and is of a scale that can be managed collectively. So, food sovereignty and food as a commons go hand-in-hand; if you have collective ownership over the land, it becomes a common good. This has profound implications for policy makers who have historically sought to privatise or nationalise resources. With privatisation comes monetisation, while with nationalisation comes regulations that are out of the control of the community.

As Feed Bristol shows, there are hidden and often non-economic dimensions of food that can only be realised when it is managed at an appropriate scale. Jose Luis Vivero Pol, human rights activist and proponent of food as a commons, sees this alternative as a powerful moral narrative: “I see it as a common ground for contemporary urban food movements and customary rural indigenous resistance struggles to converge.”

## **From fringe idea to mainstream**

This article skims the surface of a highly complex field of study emerging at the fringes of mainstream academia. In thinking about food, we often forget to reflect on the economic system that governs both its production and us. If we begin to recognise the flaws of this system, we could open the door to the next paradigm shift. The move to relocalisation and collective action can help us wriggle free from the corporate control of food and emerge with a vision that is more sustainable and inclusive. Food, after all, is a human right not a privilege.

## Uniting in a fight for food sovereignty

From The conversation online newsletter – this is only part of the article -click for the rest  
<http://theconversation.com/food-democracy-why-eating-is-unavoidably-political->

One such public is the transnational peoples' movement [La Via Campesina](#). It represents small-scale producers, pastoralists, migrant workers, fisherfolk, landless peasants and indigenous peoples in 70 countries across the global north and south. For more than 20 years, members have embodied an “agrarian” citizenship that goes beyond class-based notions of political representation.

La Via Campesina provides a model of rural action based on common interests in the different struggles against policies that impact negatively on farmers worldwide. These impacts include low crop and livestock prices, exploitative temporary farm labour, distorting subsidies and the disappearance of family farms.

The question of food is fundamentally social. Who should provide food and how? Whose livelihoods should



be protected?

La Via Campesina's concept of food sovereignty proposes a radical social transformation to make food systems more democratic. [Ian MacKenzie La Via Compesina/flickr](#), [CC BY](#)

La Via Campesina's concept of food sovereignty, the right of peoples to define their own food and agriculture policies, is a proposal for radical social transformation to make food systems more democratic. It has evolved from a catch-cry opposing trade liberalisation to a concept adopted by broader constituencies. Among these are food democracy advocates in the global north who share the view that the corporate food system actively contributes to global hunger, poverty and malnutrition.

The campaign for food sovereignty spans many issues including gender inequality, land reform, genetic modification, intellectual property, biodiversity, urban agriculture and labour migration. It has emerged as a political project that talks to power at venues including the United Nations [Committee on World Food Security](#).

Hundreds of members of La Via Campesina and like-minded organisations met recently in a very different forum in Sèlinguè, a village in Mali, West Africa. The resulting [Declaration of the International Forum of Agroecology](#) presents the peoples' alternative to conventional industrial agriculture and the destructive elements of international trade.

It states that traditional methods of food production such as intercropping, mobile pastoralism and composting play an integral role in creating equitable, sustainable and healthy food systems, as opposed to monocultures and biotech solutions.

The meeting declared:

Agroecology is the answer to how to transform and repair our material reality in a food system and rural world that has been devastated by industrial food production and its so-called Green and Blue Revolutions ... [it is] a key form of resistance to an economic system that puts profit before life.

A revolution of a different colour, agroecology is based on farmers' local innovation and peer-to-peer information sharing and diálogo de saberes (ways of knowing through dialogue). It seeks to return power to communities, to:

... put the control of seeds, biodiversity, land and territories, waters, knowledge, culture and the commons in the hands of people who feed the world.

Relocating control of food production and distribution to growers and eaters rather than corporations requires the mobilisation of publics of citizens committed to resolving the public problem that is our food system. The building of coalitions between consumer-oriented initiatives and the more radical food sovereignty movement is essential to develop a long-term constructive agenda for widespread change.

While practising political consumerism and strengthening local food economies are important, only the emergence of democratic food publics based on new notions of citizenship can achieve such change.

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## Look what is happening in the USA

### Setting the Record Straight on the Legality of Seed Libraries(USA)

From an article in Shareable - <http://www.shareable.net/blog/setting-the-record-straight-on-the-legality-of-seed-libraries>

Look what happened in the USA – this is only a small part of the article, just to let you know what can happen when the big seed companies get their say.

After the Pennsylvania Department of Agriculture [cracked down on a seed bank in the Joseph T. Simpson Public Library in Mechanicsburg, Pennsylvania](#), hundreds of seed libraries in the U.S. are suddenly wondering if they are breaking the law. [According to Pennsylvania regulators](#), in order to give out member-donated seeds, the [Simpson Seed Library](#) would have to put around 400 seeds of each variety through impractical [seed testing procedures](#) in order to determine quality, germination rate, and so on. The result of the Pennsylvania crackdown is that the library will no longer give out seeds other than those which are commercially packaged.

Ironically, this is in the name of “protecting and maintaining the food sources of America.” In [this news article that went viral](#), regulators said that “agri-terrorism is a very, very real scenario.” In reality, seed libraries have emerged to protect our food sources and ensure access to locally adapted and heirloom varieties. The public's access to seeds has been decreasing since a 1980 [Supreme Court ruling](#) that a life-form could be patented. Since then, big seed companies have shifted away from open-pollinated seeds to patented hybridized and genetically engineered varieties. The companies prohibit farmers from saving and replanting such seeds, requiring that they buy new seeds each year. Counter to this trend, seed libraries give members free seeds and request that members later harvest seed and give back to the library thereby growing the pool of seeds available to everyone.



## Seed Law Basics

It's important to set the record straight about the legalities of seed libraries. Let's begin with the basics: In [every state](#), there are laws requiring seed companies to be licensed, test seeds, and properly label them. At the federal level, there is a comparable law governing seed companies that sell seeds interstate. All of these laws exist for good reason: If a tomato grower buys 10,000 tomato seeds, the grower's livelihood is on the line if the seeds turn out to be of poor quality or the wrong variety. Seed laws, like other truth-in-labeling laws, keep seed companies accountable, prevent unfair competition in the seed industry, and protect farmers whose livelihoods depend on access to quality seeds. The testing and labeling of the seeds also helps to prevent noxious weeds and invasive species from getting into the mix.

In some states, the licensing, labeling, and testing laws only apply if you sell seed. In other states, such as California, the laws apply if you even offer seeds for barter, exchange, or trade. How do you define words like sell, barter, exchange, and trade? And how do they apply to seed libraries? Read on if you are ready to venture into interesting legal grey areas.

In at least one state (yup, Pennsylvania), even supplying seeds make you subject to at least some regulation. But the Pennsylvania seed law is about to be put to the test, and we think that regulators should have read their law more carefully.

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## The Gift of the Maya

by [Albert Bates](#), originally published by [The Great Change](#) | JUL 28, 2015



It takes a bit of time for the elegance of a food forest to emerge, something on the order of decades. Strolling the garden through the morning mist in a hot Tennessee summer, we tried to remember what this landscape looked like 21 years ago, when we moved to this site, set up our yurt and started in on our little corner of paradise.

What we see today does not remotely resemble what was here then. Then there was a wire-fenced, stony horse paddock in a re-emerging poplar forest. The deep soil tilth now is blanketed in thick vines, their giant leaves hiding

pumpkins, squashes and melons. Bamboo cathedrals twined with akebia and passionfruit arch 70 feet (20 meters) over a duck pond next to our cob henhouse. As we let out our poultry for their daily bug chase, bullfrogs croak and leap away. A snapping turtle submerges beneath the mat of duckweed and hyacinths at the water's edge. All around us figs, peaches, apples, pears, blueberries, cranberries, cherries, plums and persimmons bend down boughs under the weight of their fruit, rabbits stealing out to grab a windfall and then hop back to cover, while high up in the oaks, beech, butternuts and hickories, squirrel forest wardens check the progress of their winter larder.

All this complexity, shrouded in mist and glistening in dew, would not be called orderly by farmers trained in Ag schools or raised in a tradition of straight rows and powerful machines with air-conditioned cabs. They can pump food from the earth the way you would pump barrels of oil, but not without depleting reserves accumulated over eons. As they pour on chemicals, the genetically monocultured crops gradually but inexorably lose nutrient density and attract predators.



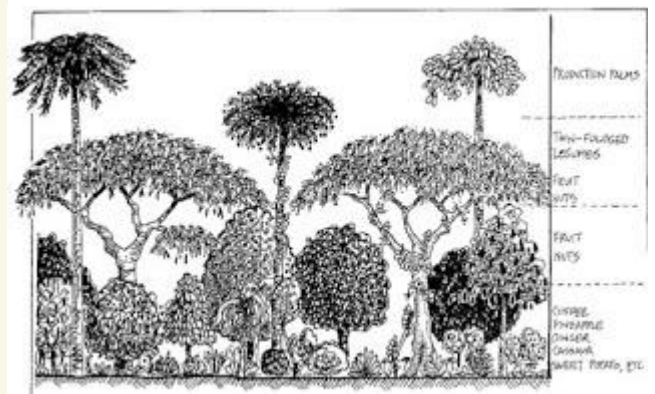
Our general health as a society reflects that loss and malaise. Family treasures are squandered on biotech voodoo and Roundup potions in the pursuit of a false paradigm of technological progress, but the escalating fixes are unable to stem the tide of biological entropy. And all the while, just beyond the fences, magical weeds of awesome power dance in anticipation of the invaders' surrender and patiently await the return of their lost domain.

We have been reading *The Maya Forest Garden* by Anabel Ford and Ronald Nigh. It tells the tale of a civilization that weathered many climate changes, foreign conquests and failed attempts at cultural genocide. That civilization is still there today, after 8,000 years. There are more children born and raised in families today whose first language is a Mayan dialect than during the Classic period 1400 years ago.

When the first two-leggeds arrived in Mesoamerica over 10,000 years ago, the region was cool and arid – akin to the Great Plains of central Canada. Over the next 2,000 years, as the Hemisphere continued to emerge from the great Ice Age, Mesoamerica became a warm and wet tropical region, reaching an early heating peak during the Holocene Thermal Maximum before settling back to the wet tropics we find there today.

Ford and Nigh disagree with popular myths told by historians of rapacious city-states that denuded their landscape to bake lime for painting temples and then starved. They write:

The Maya and their ancestors have been living in this region for more than 10,000 years. Why would they cut down the forest that was their garden? Even after concerted efforts by governments and private interests to convert forest to pasture over the past half of the twentieth century, and after development schemes to introduce commercial annual monocrops into the perennial polycultivated croplands, and in spite of global trade agreements that have jeopardized the smallholder, the Maya forest has lived to tell the tale.



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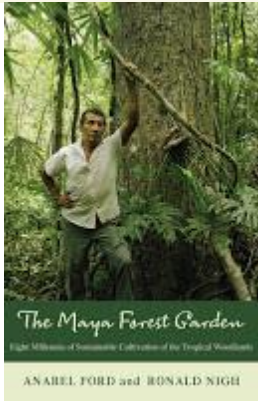
It is important to understand that the developed European culture views agriculture and forests as incompatible. That idea is embedded in our understanding of "arable" [*Latin: to plow*] and in the Malthusian view that agricultural lands are finite, based on the medieval concept of "assart," the act of converting forest into arable land.

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To evaluate ancient land use, we must conjure a world without the plow, without cattle or horses, where work in the fields was accomplished by hand, and where transport was on foot.

According to Ford and Nigh, the Maya forest garden was not just an indelible feature that withstood the rise and fall of successive empires, but holds, in its ramblings and roots, a hidden-in-plain-sight way through our present crises.

We argue that conservation of the Maya forest must engage the traditional farmer, whose skills and knowledge created – and continue to maintain – the forest and its culture.



Land use changed over time based on social constraints. In ancient times, smallholders who produced a variety of goods and services from the forest were at times compelled to increase production to pay taxes and to feed the elites and their armies. This process continues today. Greater demands for exports from the forest require denser populations, because working hilly terrain without machines or animals requires hands and feet. Today it may imply imported labor, a form of economic slavery not much different than in the Classic Maya era. To the extent that human labor for cultivation and transportation has been replaced with fossil energy, the requirements for human slaves have diminished.

One barrel of oil has 5.7 million BTUs of energy, or 1700 kWh. An average adult can, in hard labor, generate 0.6 kWh/day. That's 11 years of human labor packed into each barrel of oil. Put another way, fifty dollars currently buys you eleven petroleum slaves working year-round at hard labor. What would those slaves cost if they were human? Ten thousand dollars? Half a million dollars? It depends on where you get them and what tasks they perform for you.

Thanks to petroslavery, we have higher wages, higher profits, really cheap products and more people doing little to nothing. The average USAnian uses 60 barrels per year (or equivalent coal, gasoline and fracked gas) or roughly 660 fossil slaves standing at the beck and call of each and every citizen. Those numbers are quite a bit less in the Mayan world today, but nonetheless significant, and growing. Farmers don't have to carry corn and mangos to the city on their backs, although no one has yet found a way to machine-harvest cacao or spray-pollinate vanilla vines.

Nonetheless, extraction costs for fossil fuels are rising -- 17% per year for the past 10 years. That drives up energy costs and as that price goes up, its like having to pay your slaves. Profits decline, and some slaves get laid off.

As we lose our energy slaves, will we go back to sending our army to snatch human slaves from weaker or less militaristic neighbors? The Classic Maya were something like that. With cheap slave energy gained by conquest they paved roads and built pyramids. Many historians assume they overran their resources or had a slave revolt, but Ford and Nigh have eliminated ecocide, because food resources never diminished. Slavery has its limits and the Maya's slaves may have reached theirs.

Misleading assumptions about Mayan ecological demise, and climate over 10,000 years, came from paleoclimatic reconstructions based on lake sediments and pollen counts. Ford and Nigh point out that the pollen data emphasize windborne pollen, and yet, in the tropics, all but about 2 percent of plants are pollinated by bees, birds, bats and butterflies.

Ford and Nigh picked up clues from ramon trees and grassland forbs, which were better indicators of the milpa cycle. While climate perturbations, sometimes severe, occurred repeatedly, the heaviest climate changes came in the Early Holocene, before the appearance of the Maya. The milpa system evolved in that era, as proof of concept for climate-resilient agriculture.

The Maya resource system, based on the milpa forest garden cycle of the past and present, adapts to extreme conditions by moderating the impacts of deluges and managing land cover against drought. The system was resilient under conditions of change, and the climatic stability of the Classic promoted the rise of the Maya civilization.



*Milpa farming: patch clearance and rotational forest plots*

#### **INSERT -Wikipedia description of - Milpa**

Charles C. Mann described *milpa* agriculture as follows, in [\*1491: New Revelations of the Americas Before Columbus\*](#):<sup>[2]</sup>

"A milpa is a field, usually but not always recently cleared, in which farmers plant a dozen crops at once including [maize](#), [avocados](#), multiple varieties of [squash](#) and [bean](#), [melon](#), [tomatoes](#), [chilis](#), [sweet potato](#), [jícama](#), [amaranth](#), and [mucuna](#).... Milpa crops are nutritionally and environmentally complementary. Maize lacks the amino acids [lysine](#) and [tryptophan](#), which the body needs to make [proteins](#) and [niacin](#);.... Beans have both lysine and tryptophan.... Squashes, for their part, provide an array of [vitamins](#); [avocados](#), [fats](#). The milpa, in the estimation of H. Garrison Wilkes, a maize researcher at the University of Massachusetts in Boston, "is one of the most successful human inventions ever created."<sup>[2]</sup>

The concept of *milpa* is a sociocultural construct rather than simply a system of agriculture. It involves complex interactions and relationships between farmers, as well as distinct personal relationships with both the crops and land. For example, it has been noted that "the making of *milpa* is the central, most sacred act, one which binds together the family, the community, the universe...[it] forms the core institution of Indian society in Mesoamerica and its religious and social importance often appear to exceed its nutritional and economic importance."<sup>[3]</sup>

#### *Article continues*

Ford and Nigh conclude that the Classic Era, while it was not without impact -- evidenced by high phosphorus lake sediment loading and diminishing soil quality -- did not end from an environmental collapse. And yet, 1100 years ago, the Empire broke down and retreated back into the jungle. Civic centers gradually depopulated and rural farms resumed their ubiquity. Soil quality began to improve and runoff to decrease.

The Maya did not disappear, they dispersed. Having little to interest outside invaders, the last of their strongholds, at Nojpeten, was **not conquered by the Spanish until 1697, on the Ides of March**. (In ancient Greece, that date also marked *Pharmakos*, which involved beating an old man dressed in animal skins and driving him from the city. History may not repeat, but it rhymes.)

When the human slavery system ended, it was not replaced by machine or animal slaves (they had neither). It was replaced with tree crops – vegetable slaves -- toiling without complaint, providing myriad household and ecological services, and asking only the occasional tender loving care. Skills that could glean the most from any terrain were passed generation to generation down to the present.

In the Cartesian view of the world everything is separated into chemicals, physical properties, or energy systems. The quantum entanglement of the real world is much less simple. It took a few thousand years for humans to find harmony with their environment and to co-evolve the comfortable Holocene climate, as much a product of human respect for the limits of the natural world as of galactic and planetary cycles. No doubt some shaman warned a Neolithic hunting party not to slay the last mastodon, but they didn't listen, and we got an Ice Age, or worse, [agriculture](#).

Once the original instructions were forgotten, thanks in no small measure to electric lights, television and the internet, the Holocene weave began unraveling. Biodiversity and soil fertility plummeted, population skyrocketed, and the popular culture of idle elite tilted to the kinky, bloodthirsty and perverse. If this sounds like the Maya, that would not be far wrong, but we are speaking of the times we live in. We have lost our way.

The Maya forest shows us a way home, should we choose to take it.

This past Thursday, NASA senior scientist James Hansen and 17 co-authors published a paper, "Ice melt, sea level rise and superstorms: evidence from paleoclimate data, climate modeling, and modern observations that 2°C global warming is highly dangerous," in the [Atmospheric Chemistry and Physics](#) discussion group. The paper noted that despite repeated warnings for more than 25 years, global greenhouse gas emissions continue to increase and fossil fuels remain the primary energy source.

"The argument is made that it is economically and morally responsible to continue fossil fuel use for the sake of raising living standards, with expectation that humanity can adapt to climate change and find ways to minimize effects via advanced technologies," the paper says. "We suggest that a strategic approach relying on adaptation to such consequences is unacceptable to most of humanity...."



*Modern farming: trying to recreate Normandy in Mexico and Belize*

Specifically, the authors, making an end run around lengthy peer review in order to address delegates who will gather at the UN climate summit in Paris in December, point out that even if the UN *denouement* is extraordinarily successful and achieves its 2-degree target, civilization will not avert catastrophe.

As Natalia Shakhova, a professor at the University Alaska Fairbanks, told Dahr Jamail of [Truthout](#) last January, the transition from the methane being frozen in the permafrost, either on land or in the shallow continental shelves, "is not gradual. When it comes to phase transition, it appears to be a relatively short, jump-like transformation from one state of the process to another state. The difference between the two

states is like the difference between a closed valve and an open valve. This kind of a release is like the unsealing of an over-pressurized pipeline."

Shakhova has been warning for years that a 50-gigaton "burp" of methane from thawing Arctic permafrost beneath the East Siberian sea is "highly possible at anytime." That would be the equivalent of 1,000 gigatons of carbon dioxide (GtCO<sub>2</sub>), three thousand times what is released from the Siberian shelf in an average year. Humans have released approximately 1,475 GtCO<sub>2</sub> since 1850 from fossil fuel burning and **land use changes**. Ninety percent of that was absorbed by the ocean; some frozen in ocean sediments as clathrates.

The Permian mass extinction of approximately 95 percent of all species on the planet 250 million years ago was triggered by a massive lava flow in an area of Siberia that led to an increase in global temperatures of 6 degrees Celsius. The lava caused the melting of frozen methane deposits under the seas. Released into the atmosphere, the Permian methane "burp" caused temperatures to skyrocket.

Hansen's group warns that is not too late to avert a similar fate this time, but it will take more than reducing carbon emissions.

Rapid transition to abundant affordable carbon-free electricity is the core requirement, as that would also permit production of net-zero-carbon liquid fuels from electricity. The rate at which CO<sub>2</sub> emissions must be reduced is about 6%/yr to reach 350 ppm atmospheric CO<sub>2</sub> by about 2100, under the assumption that improved agricultural and forestry practices could sequester 100 GtC.

Actually, we know that improved agricultural and forestry practices can sequester on the order of 10 GtC annually, and could return the atmosphere and oceans to pre-industrial greenhouse chemistries (250 ppmv CO<sub>2</sub>e) by 2100 if scaled rapidly. We know that from studying, among other clues, the Maya forest.

Ford and Nigh conclude:

If we take these real human and ecological costs into account and systematically compare them to the intensive Maya milpa, we find that milpa is neither primitive nor unproductive and is positive for human health and the environment. Food produced by the milpa is of high quality, as it is based on the natural fertility maintained in the forest garden cycle, where regenerated woodlands continually restore minerals and organic matter. High biodiversity assures that pesticides are unnecessary and all wastes are recycled in the field. Water is managed by the conservation of vegetation and by the infiltration of rainwater stored in the soil. A healthy and natural relationship is fostered for animals that are attracted to the secondary vegetation of the milpa forest garden, resulting in a kind of semi-domestication based on the landscape. Dependence on fossil fuels is nonexistent, and far from contributing to greenhouse gas emissions, the Maya milpa creates a long-term store of carbon in the soil.

Significantly, the milpa and its diversity provide a livelihood for farm families and a food surplus for local markets.

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Yet milpa agroforestry seems to violate the master narrative of our times: the incessant march of progress from hunter-gatherer to complex sedentary agriculture. The Eurocentric vision assumes that Western civilization is the pinnacle of human progress and that disappearing cultures can only aspire to emulate it. Not only in the popular mind but also in the view of scientists, politicians, and technicians, it is capitalist industrial agriculture that is the unquestioned standard



of production; all previously existing forms are, in this view, ready to be replaced.

We must vindicate the milpa forest garden and similarly sophisticated systems of human ecology that are native to their place. Their intricacy, subtlety, and contribution to our environmental balances are critical to our future.

The gift of the Maya, at least some of them, is to never have forgotten. The gift of Anabel Ford and Ronald Nigh, and James Hansen, after rigorous lifetimes in this arcane scientific pursuit, is the retelling of that story to a world audience.

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## **PERMACULTURE WORLD EVENTS**

### **International Permaculture Convergence, London 2015**

Conference – 8-9 September 2015 – The Light, London

Go to the web site for more info - <https://www.ipcuk.events/>

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### **South East Asian Bioregional Permaculture Convergence**

November 16<sup>th</sup> to 30<sup>th</sup> 2015

Ilagan Capitol, Isabela, Philippines

[http://www.seapc2015.com/program\\_proper.php](http://www.seapc2015.com/program_proper.php)

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### **The 13<sup>th</sup> Australasian Permaculture Convergence – PERTH W.A 2016.**

Still in planning but start marking your calendars with the following tentative dates:

**3rd October 2016 - Permaculture public EXPO/Fair**

**3rd October 2016 - Convergence Welcome Dinner**

**4th October 2016 - Part 1 of 2 Day Permaculture Convergence**

**5th October 2016 - Part 2 of 2 Day Permaculture Convergence**

6-7th October 2016 - Concurrent Tours (Tentative: Two day south tour, two day north tour, 1 day Perth Tour, 1 day Hills Tour)

8th October 2016 - Post APC Master Classes (booked by us)

9th October 2016 - Rest Day

10-14th October 2016 - Concurrent Courses - Advanced Teacher training and Dynamic Groups (or similar)

For more information join the Facebook group:

<https://www.facebook.com/groups/1625742390991220/>

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## THE BENEFITS OF BEING A FINANCIAL MEMBER OF PERMACULTURE CAIRNS

Eleven Monthly meetings, with information, movies/videos and presentations from informative and interesting members and guest speakers. Plant of the month, Tool of the Month, Tip of the Month, Book of the Month, Cuppa and nibbles and networking time

Discount on most Workshop Fees organised by Permaculture Cairns

Learn more skill by attending Workshops, Permibeers, information nights and events

Learn more about Permaculture Practices and Principles by attending Meetings, Workshops, Permibeers.

Access to tropical vegetable plants and seeds and other resources.

Monthly Newsletter with local info on workshops and events and Permaculture news from around the world

Networking with people of similar interests from other organisations in the area eg. Seed Saver Groups, BioDynamic Group, Local Exchange Trading System aka LETS, Community Garden Groups, Non Government Organisations like Terrain and Northern Gulf Resource Management Group.

Receive email notices of Events/ Courses by Permaculture Cairns, other relevant businesses/organisations - not all of these notices will be in our newsletters if the news was received after the issue date.

Free access to our Library books on a wide range of Permaculture Subjects

Continue learning about Permaculture through shared knowledge and experience

Learn how to live gently on this earth – Care for the Earth, Care for People and Share you excess plants, seeds, produce and skills.

**Meet and make new friends.**

**HAVE YOU PAID YOUR MEMBERSHIP FEES FOR 2015 – it's half price until 1<sup>st</sup> January 2016**

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## NEWSLETTER PLANT OF THE MONTH

### Arrowroot – Canna Edulis

In the tropics this plant is fabulous to have in the garden, so easy to grow, so many uses. It will grow in full sun or part shade and will reach up to 3m in good soil, but will grow just about anywhere if given some water now and again. It is an evergreen upright plant which grows in clumps. The flowers are red and the seeds are infertile.

The young tubers are edible when harvested before the new leaf develops. Peeled and roasted it makes a great sweet treat to a meal. Or you can peel tubers and cut into bit size pieces and add to casseroles.

The young leaves are edible for humans. Chooks, pigs, cows, donkeys and goats will eat the leaves and the pigs the tubers.

To make arrowroot flour, peel the tubers and cut into 2cm cubes and blend with water to a pulp, or mince. Then tip pulp into a large contained and add water. Drain off and pour into to trays to dry in the sun. It is used as a thickener in casseroles and stews.

But at home I find the best use is for making mulch for the garden, as a wind break and a shelter plant for ginger and turmeric plant and as a weed barrier. Chop and drop works well and if put through a mulcher to make a finer product it is great for making compost.

Plant tubers all year round spaced about 30cm apart. I move mine up and down the fence line so they aren't growing in the same soil year after year. This seems to work well.

Arrowroot has a high potassium content of 12% and between 1 - 3% protein, Vitamin C 3%, Iron 12%, Vitamin B6 15% and Magnesium 6%. The younger leaves contain about 10% protein.

This plant along with the Pigeon pea and Comfrey make great plants to have in the garden, especially for making mulch and composting materials.

Please PRINT – SIGN – SCAN and RETURN by email to  
treasurer@permaculturecairns.org.au.



## Permaculture Cairns

### Membership Form 2015

One year's membership fee - 1 Jan – 31 Dec:

☐ Household membership \$30    ☐ Renewing Member    ☐

Individual membership    \$20    ☐ New Member    ☐

Name(s) of all applicant(s) & DOB if under 18yrs:

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.....  
.....

Postal Address: .....

..... Postcode: .....

Phone(s): .....

Email: .....

Signature: .....

Payment may be made at Meetings, at Cairns Penny or Online Direct Deposit to Permaculture Cairns A/c at Cairns Penny in Grafton Street. BSB704-966 A/c No. 100009440 please include your Surname as reference.

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

YOUR NAME: .....

Who was the Course Presenter: .....

When did you do the Course: .....

Where did you do the Course: .....

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

### Enquiries

President: Carol Laing

Secretary: Peter Spooner

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Treasurer: Jenny McGrath [treasurer@permaculturecairns.org.au](mailto:treasurer@permaculturecairns.org.au)

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