

FCSI
FOODSERVICE CONSULTANTS SOCIETY INTERNATIONAL

Food for thought on Climate Change

Clara Pi, MSc. RD. FCSI

We Share We Support We Inspire

A Carbon Neutral Event

FOOD FOR THOUGHT ON CLIMATE CHANGE:

Saving our planet one carbon bite at a time!

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Past Chair, FCSI Asia Pacific
FCSI WWB Director, Secretary/Treasurer

FHA 2016 2016 FCSI APD Seminar, FHA Singapore

Learning Objectives

- The challenges we face today?
- Impact of climate change on food supply?
- Carbon footprint of our foods? What is a low carbon diet?
- Global trends in health issues?
- How can our choice of food mitigate climate change?
- Impact of food waste on carbon emission?
- Low carbon food initiatives and trends around the world?
- What can you do?

LESTER R. BROWN

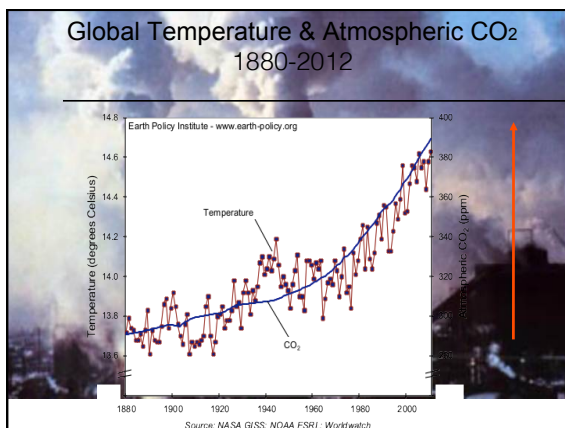
WORLD ON THE EDGE

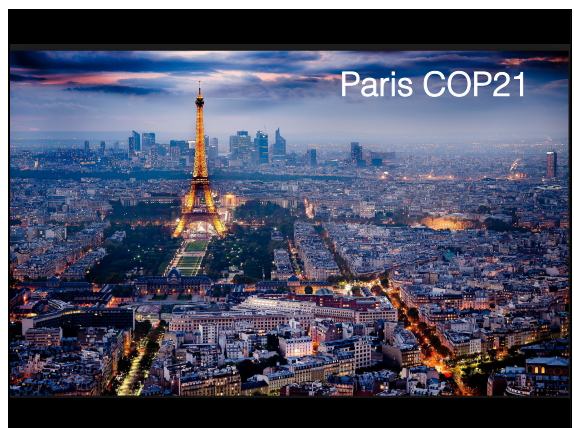
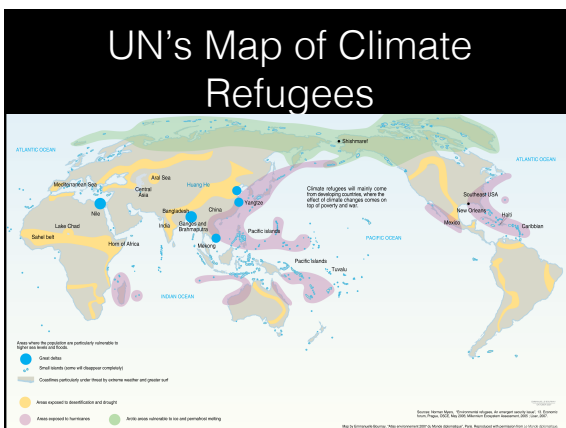
How to Prevent Environmental and Economic Collapse

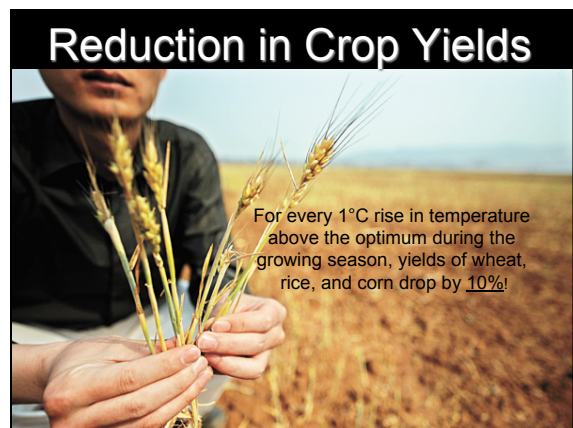
«How to prevent Environmental and Economic Collapse»

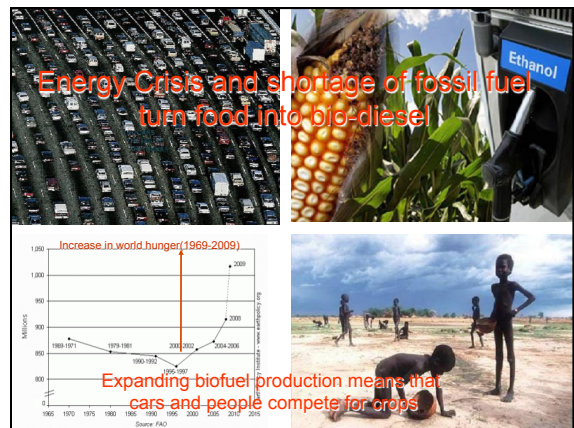
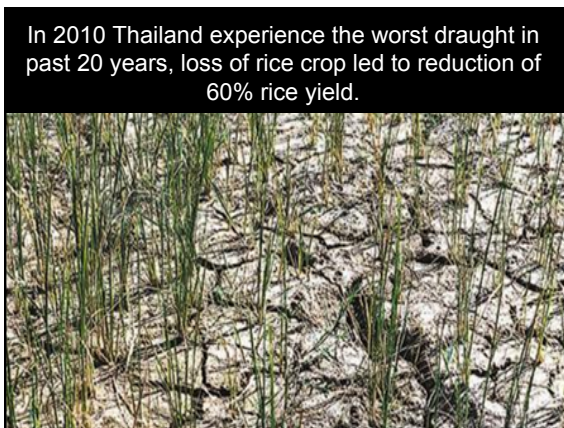
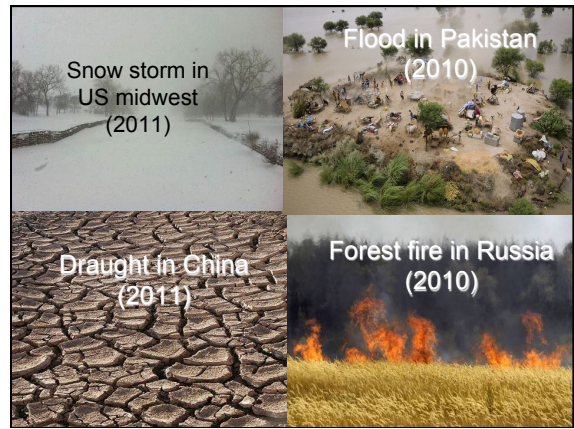
”...mankind has pushed civilization to the brink of collapse by bleeding aquifers dry and overplowing land to feed an ever-growing population, while overloading the atmosphere with carbon dioxide.”

EARTH POLICY INSTITUTE









Food Equation

240 Kg corn = enough ethanol to fill 100 Litre SUV tank
 240 Kg corn = can feed a person for one entire year



Loss of farm land & crop yield: Our World has Become Toxic

- Excess use of chemical fertilizers **spoils the properties of soil** such as pH, conductivity, osmotic pressure and the capacity of water holding.
- Thus chemical fertilizers can make **soil infertile** by increasing its acidity.
- This also affects the population of micro-organisms and also other helping parameters of agriculture.
- Excess or uncontrolled use of pesticides can **spoil the balance of insect population** thus **impacting pollination** and our food chain.

Loss of farm land:

- Over-plowing, over-grazing, deforestation are eroding soils and expanding deserts
- Roughly **1/3 of the world's cropland is now losing topsoil** faster than it can be reformed

Three Indicators to Watch

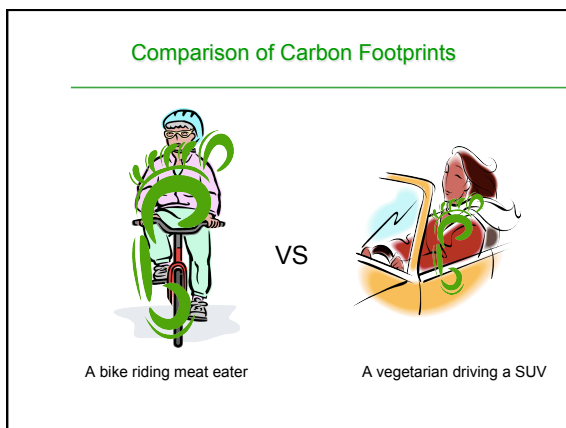
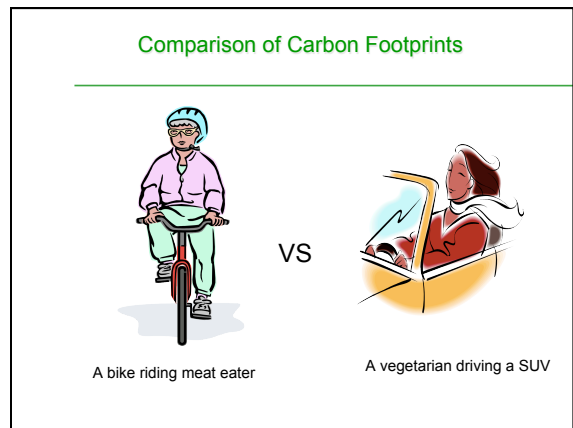
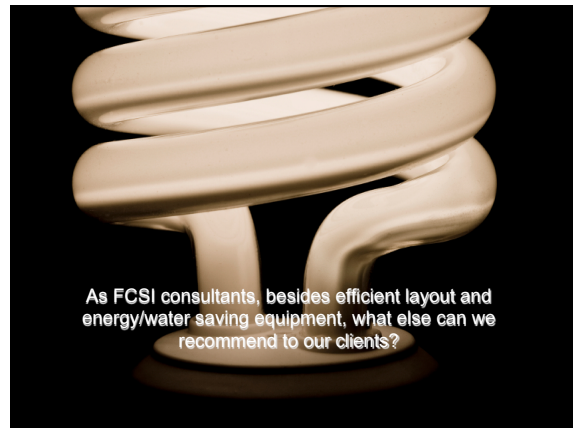
Economic	Social	Political
 Food Prices	 Hunger Rates	 Number of Failing States

These indicators help give a sense of how close to the edge our civilization may be.

Photo Credit: iStockPhoto / EllenHewise, Sean_Warren, zabelin

As an individual in our personal life and at work, what can we do to make a difference??

Reducing carbon emission and saving earth resources should now be the **KEY** mission for all corporation and businesses!



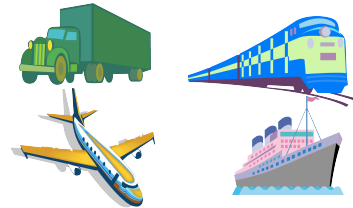
Industrial Beef production is the worst culprit behind GHG emissions.

- Cattle produce methane gas, 30 times more warming effect than CO₂. Farming cattle leads to deforestation and habitat destruction
- Livestock are one of the most significant contributors to today's most serious environmental problems.™ (2006 UN report)

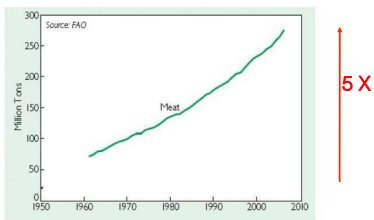


Did You Know?

Globally, livestock for meat and dairy production accounts for 18% of greenhouse gases, **more than all** of Earth's cars, trains and planes put together?

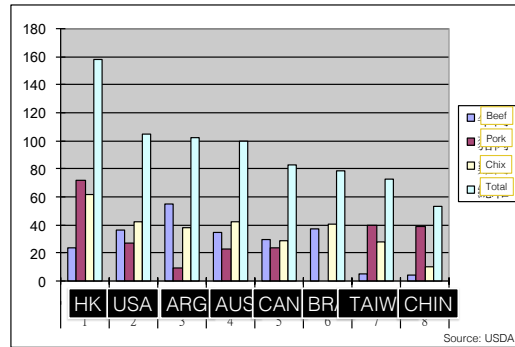


World Meat Production
(Source: World Watch Institute)

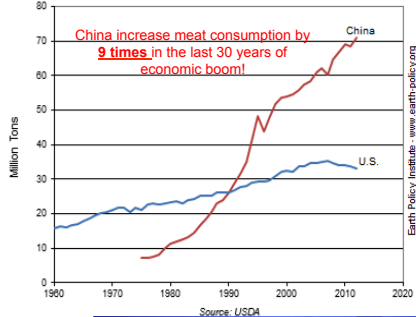


In 2006, farmers produced **276 million tons** of meat
 ■ **Five times** as much as in the 1950s
This amount will DOUBLE by 2050!

Annual Per Capita Meat Consumption (2012)
Kg/Person/Year



Meat Consumption in China and the United States, 1960-2012

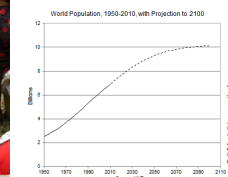
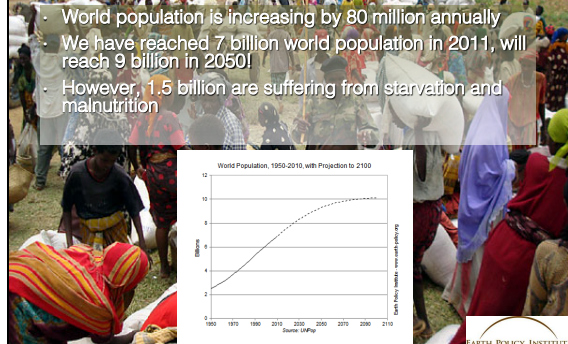


EARTH POLICY INSTITUTE

Providing a Plan to Save Civilization

Food Demand Growing

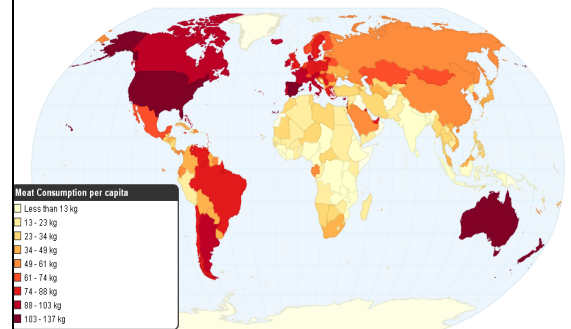
- World population is increasing by 80 million annually
- We have reached 7 billion world population in 2011, will reach 9 billion in 2050!
- However, 1.5 billion are suffering from starvation and malnutrition



Our insatiable appetite for meat is met by intensive feed production, which causes deforestation, over-plowing, erosion of topsoil and the bleeding dry of our aquifers.



At present some 3 billion people are trying to move up the food chain and eat more grain intensive livestock products



Furthermore, the heavy use of chemical fertilizers, pesticides and uncontrolled waste disposal is polluting our environment and impacting on food sustainability, safety and our health.



the resulting industrialized food systems cause major health concerns such as obesity, widespread exposure to toxic chemicals, antibiotic resistance, food-borne illness, environmental degradation, and the threat posed by genetic engineering to environmental sustainable food production.



Rain forest in Brazil



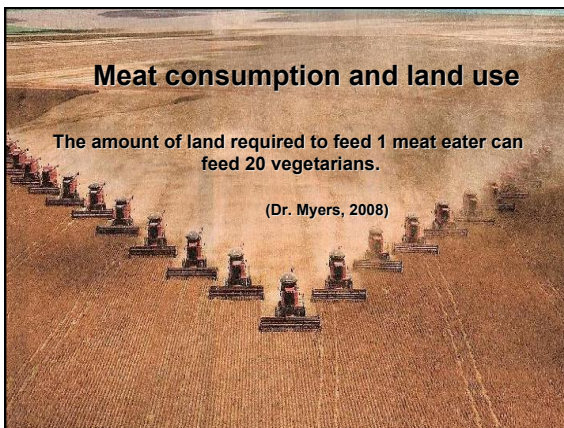
cleared for soybean crops





Livestock & people compete for food!

Currently we are facing global food shortages but 1/3 of our harvest and over 90% of soybean crop is being used for feeding our livestock??!!



Global trend of health issues?

Global trends of health issues

- Recent decades have seen a trend towards less sustainable and less healthy diets,
- population consuming high amounts of resource intensive meat, fat and sugar which is a risk for individual health, social systems and the environmental life support systems.
- Obesity, type 2 diabetes, hypertension, and cancer are wide-spread diet-related diseases.

FIGHTING OBESITY AND FOOD-BASED PATHOLOGIES

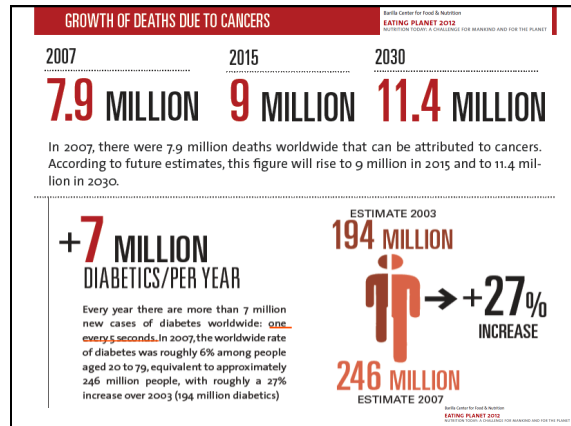
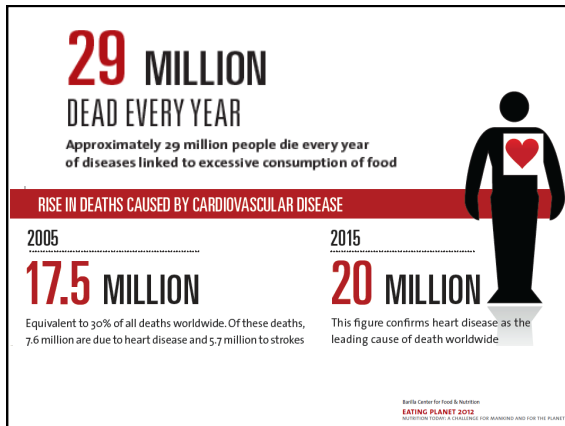
Eating has become a banal experience, leading to the epidemic of obesity and diseases linked to obesity

1.3 BILLION

PEOPLE ARE OBESE OR OVERWEIGHT

It is estimated that 1.3 billion people in the world are obese or significantly overweight

World Center for Food & Nutrition
EATING PLANET 2012
NUTRITION TODAY: A CHALLENGE FOR HUMANITY AND FOR THE PLANET



World Health Organization

The number of people worldwide with type 2 diabetes is expected to DOUBLE by 2030

Rates of cardiovascular morbidity and mortality for diabetics are 2X to 4X higher than those who do not have diabetes

¹⁰World Health Organization: Country and regional data: prevalence of diabetes worldwide. <http://www.who.int/mediacentre/factsheets/fs132/en>. Accessed 27 September 2011.

**Latest Research on:
 Impact of plant based diet health and our environment?**

American Dietetics Association's Position Paper on Vegetarian Diets (2009)

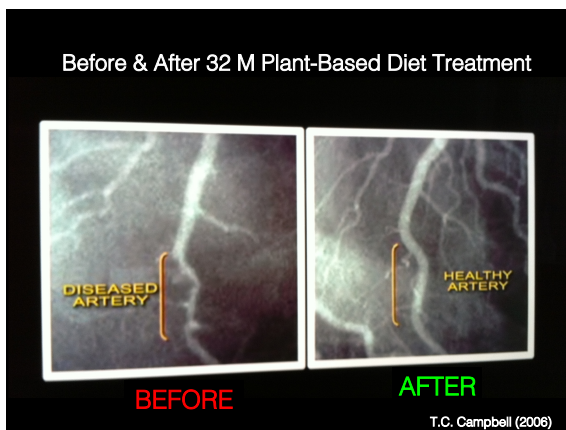
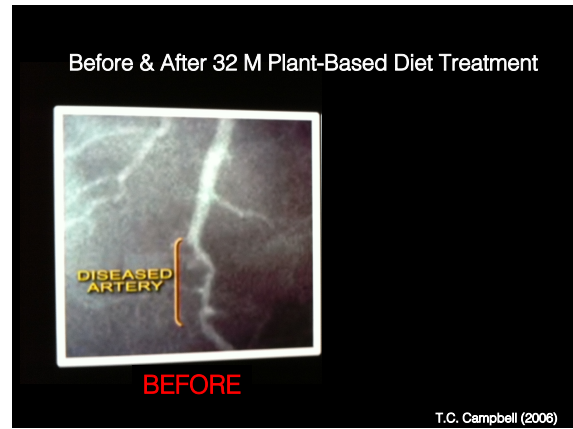
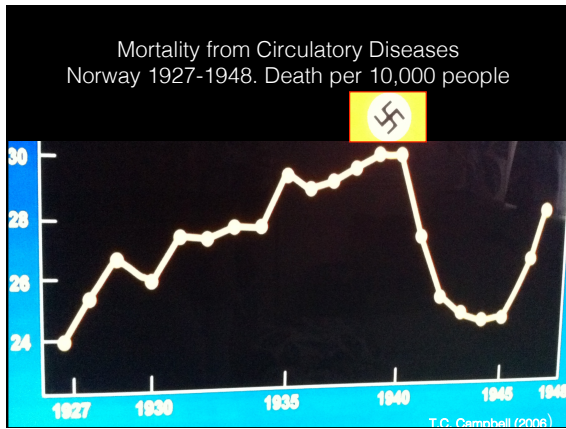
- Studies continue to show that plant-based whole foods diets can aid in **reversing** the symptoms of America's most devastating diseases: **type 2 diabetes, cardiovascular disease, and some types of cancer.**
- references **more than 200 studies and papers** to support its conclusions.

¹⁰Craig WJ, Mangels AR: Position of the American Dietetic Association: vegetarian diets. *J Am Diet Assoc* 109:1266-1282, 2009

Plant based diets = health

- In *The China Study* (published in Jan 2005), Dr. Campbell details the connection between plant-based nutrition and heart disease, diabetes, and cancer, and also its ability to reduce or reverse the risk or effects of these deadly illnesses.
- The research project culminated in a 20-year partnership of Cornell University, Oxford University, and the Chinese Academy of Preventive Medicine; a survey of diseases and lifestyle factors in rural China and Taiwan; "this project eventually produced more than **8000 statistically significant associations between various dietary factors and disease.**"
- From the study, Campbell was able to draw a single unifying principle: **"People who ate the most animal-based foods got the most chronic disease. . . . People who ate the most plant-based foods were the healthiest and tended to avoid chronic disease."**
- The China Study also examines the source of nutritional confusion produced by powerful lobbies, government entities, and irresponsible scientists.

THE CHINA STUDY
 Startling Implications for Diet, Weight Loss and Long-Term Health



Plant-based eating pattern in the prevention and treatment of CVD

- Studies found blood pressure control was inversely proportional to the amount of animal products consumed.
- Those abstaining from all animal products achieved the most significant improvements.
- A plant-based eating pattern that includes nuts, soy and /or soluble fiber can reduce LDL cholesterol by 25-30%, an amount comparable to what can be achieved with statin drugs
- Another 5 year study demonstrated the reversal of heart disease with low fat (10%), plant-based eating pattern

*Frendowsen HR, Barnard ND: Effects of plant-based diet on plasma lipids. *Am J Cardiol* 104:947-956, 2009

*Appelby PN, Davey GK, Key TJ: Hypertension and blood pressure among meat eaters, fish eaters, vegetarians and vegans in EPIC-Oxford. *Public Health Nutr* 5:643-654, 2002

*Fischke CR, Weidner G, Ellert-Eller M, Scherwitz L, Merz W, Woden TA, Martin R, Lipsenthal L, Finkel R, Saunders D, McCormack P, Scheer JM, Collins RE, Guarnieri EM, Ornish D: Comparison of coronary risk factors and quality of life in coronary artery disease patients with versus without diabetes mellitus. *Am J Cardiol* 97:1267-1273, 2006

BREAKING MEDICAL NEWS

PCRM PHYSICIANS COMMITTEE FOR RESPONSIBLE MEDICINE

Animal Protein Linked to Increased Risk for Type 2 Diabetes

- Animal protein increases risk for type 2 diabetes, according to a study published online in the *American Journal of Epidemiology*.
- Researchers monitored protein intake from animal and vegetable sources and diabetes incidence rates in more than 200,000 participants from the Nurses' Health Study, the Nurses' Health Study II, and the Health Professionals Follow-Up Study.
- Those who consumed the highest amount of animal protein increased their risk for type 2 diabetes by 13 percent, compared with those who consumed the least animal protein.
- Participants who replaced 5 percent of their protein intake with vegetable protein, including potatoes, legumes, and grains, decreased their risk for diabetes by 23 percent.
- Malik VS, Li Y, Tobias DK, Pan A, Hu FB. Dietary protein intake and risk of type 2 diabetes in US men and women. *Am J Epidemiol*. Published online March 26, 2016.

65

UN News Centre
with breaking news from the UN News Service

New UN report links processed meats to cancer in humans; red meat also likely to cause the disease

Red meat on sale at Hamarwayne market in Mogadishu, Somalia. Photo: AMISOM/Omar Abdulsalan

26 October 2015 – The cancer research arm of the World Health Organization (WHO) has determined that the consumption of processed meats like hotdogs, ham, sausages and meat-based sauces causes colorectal cancer, while eating red meat like beef, pork and lamb is "probably carcinogenic to humans."

42
Like
Tweet
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BREAKING MEDICAL NEWS

PCRM PHYSICIANS COMMITTEE FOR RESPONSIBLE MEDICINE

- Vegetarian diets increase longevity and reduce greenhouse gases, according to a study published in *The American Journal of Clinical Nutrition*.
- Researchers investigated health impacts and greenhouse gas emissions related to dietary patterns among Seventh-day Adventists. They found that non-vegetarians experienced a 20 percent higher mortality rate than vegetarians.
- A vegetarian diet reduced emissions by 29 percent while a semi-vegetarian diet reduced emissions by 22 percent, compared with non-vegetarian diets.
- This study emphasizes that even modest reductions of animal product consumption potentially provide significant health and environmental benefits.

Soret S, Mejia A, Batech M, Jaceldo-Siegl K, Harwatt H, Sabatè J. Climate change mitigation and health effects of varied dietary patterns in real-life settings throughout North America. *Am J Clin Nutr*. 2014;100:490S-495S.



FOOD FOR LIFE

The Power of Food for Health

Eating for the Health of You and the Earth

- Research shows that animal products are a major contributor to environmental damage, such as fresh water scarcity, air and water pollution, climate change, deforestation, and erosion.
- **By transitioning to a plant-based diet, humans would use far fewer resources to meet the nutritional needs of the world's population.**
- Eighty percent of agricultural land currently used for livestock could be used to grow crops for direct human consumption.
- **Plant-based diets are healthier choices for optimal health and nutrition.**

Diouf J. Agriculture to 2050 – The Challenges Ahead. Food and Agriculture Organization of the United Nations. 2009. Available at: <http://www.fao.org/news/story/item/36153/icode/>. Accessed March 21, 2013.
 Shenfield H, Carter P, Weissenauer T, et al. Livestock's Long Shadow. Food and Agriculture Organization of the United Nations. Rome, 2006:xxi.
 Goodland R, Anhang J. Livestock and Climate Change. *World Watch Magazine*. Washington, DC, 2009;10-19.
 Hertwich E, van der Vlist E, Suh S, et al. Assessing the Environmental Impacts of Consumption and Production: Priority Products and Materials. United Nations Environmental Programme, 2010:82.

BREAKING MEDICAL NEWS

PCRM PHYSICIANS COMMITTEE FOR RESPONSIBLE MEDICINE

- Vegetarian and vegan diets are best for the environment and human health, according to research published online in the *Proceedings of the National Academy of Sciences of the United States of America*.
- Researchers assessed several regional models that incorporated environmental, economic, and health impacts associated with a dietary change in the future. Diets compared included proportional reduction in animal products, reduced or meat-free diets, and diets based on current health standards.
- A shift to a plant-based diet projected reductions in global mortality and greenhouse gases caused by food production by 10 percent and 70 percent, respectively, compared with a control scenario set in 2050. A global dietary shift would save an estimated 79 million lives and avoid 5.1 million deaths per year.
- Estimates for a **completely vegan diet** project closer to 129 million lives saved and 8.1 million deaths avoided. These projections also saw trillions of dollars saved in health care costs by 2050.

Springmann M, Godfray HCJ, Rayner M, Scarborough P. Analysis and valuation of the health and climate change cobenefits of dietary change. *Proc Natl Acad Sci U S A*. Published online March 21, 2016.



Therefore promotion of a healthy diet also reduces the environmental footprint of food consumption globally.




PCRM PHYSICIANS COMMITTEE FOR RESPONSIBLE MEDICINE

HEALTH AND NUTRITION

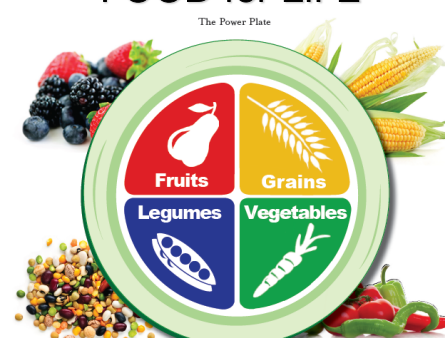
FOOD FOR LIFE
The Power of Food for Health
Classes, training, nutrition information, and more

ETHICAL RESEARCH and EDUCATION

Americans Oppose Testing Cosmetics on Animals
Survey finds 72 percent agree testing is unethical

FOOD for LIFE

The Power Plate

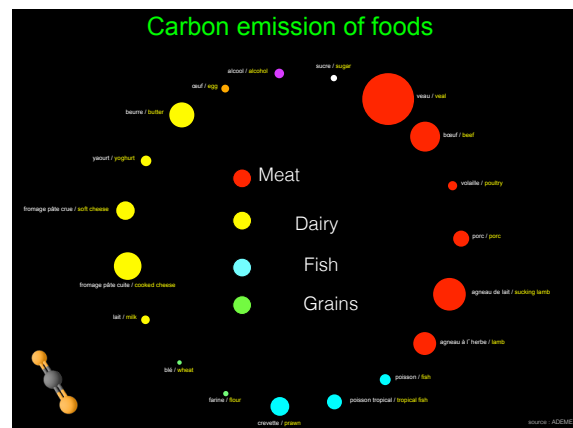


www.ThePowerPlate.org



As FCSI consultants, we need to:

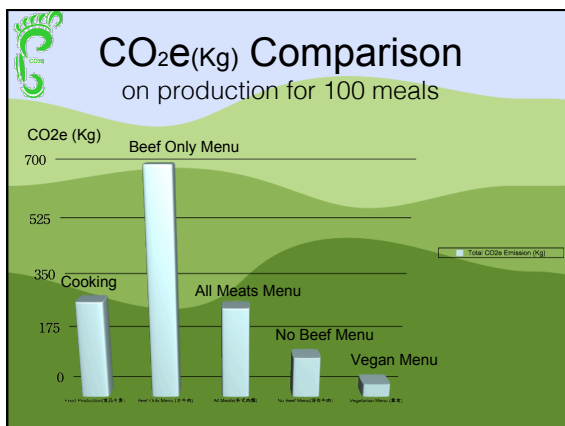
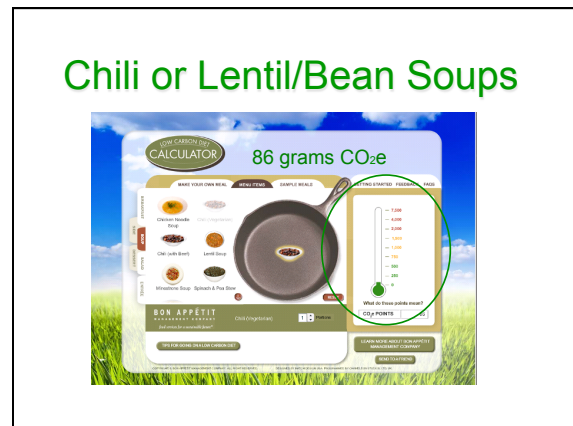
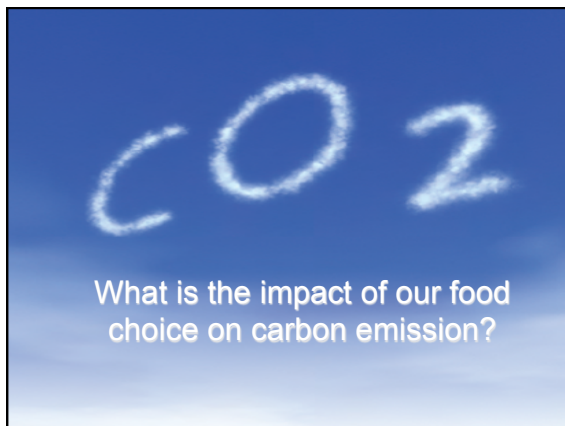
- 1. advise on the carbon management in foodservice operations**
- 2. plan and design for low carbon facility & operations**
- 3. help clients to reduce the usage frequency of high carbon emitting foods in menu planning.**



Low Carbon Diet (Climate Change Diet*)

- Buy fresh, locally-produced foods...
- Eat fewer processed foods...
- Reduce the amount of meat and animal and dairy products we eat...
- Eat foods lower down the food chain – grains, fruits and vegetables that are cheaper to grow, use less energy and less land space...
- Buy foods in season...
- Waste less food...

*"Health Professionals Taking Action on Climate Change". BMJ. 2008;336:733-734 (5 April). doi:10.1136/bmj.39538.509456.80 (published 2 April 2008)



Low Carbon Diets VS Vegetarianism

- Eat more local fresh in season foods
- Eat less dairy products
- Eat more whole grains, brown rice, natural and unprocessed foods
- Eat less frozen foods, as freezing requires energy, hence causing carbon emission.
- Use the concept of food miles to choose foods
- Eat more local organic foods
- Simplify cooking method and reduce cooking time
- Try not to waste foods, re-use leftovers where possible

Why Organic?

- Organic foods are produced without synthetic pesticides and fertilizers, growth hormones and antibiotics
- Nitrous oxide (300X CO₂ global warming effect) and other potent greenhouse gas is emitted when these chemicals are applied to farmland
- Conventional fertilizers also pollute water ways, killing sea/river life, thus emit more methane and causing erosion, a process that creates CO₂.

What matters before...

Nutrition Facts	
Serving Size: One Cheeseburger (130g) Serving Per Container: 1	
Amount Per Serving	
Calories 710	Calories From Fat: 450
% Daily Value	
Total Fat 42g	81%
Saturated Fat 21g	91%
Cholesterol 150g	53%
Sodium 1530mg	59%
Total Carbohydrate 55g	22%
Dietary Fiber 5g	2%
Sugars 11g	
Protein 55g	
Vitamin A 7%	Vitamin C 3%
*Percent Daily Values are based on a 2,000 calorie diet. Your daily values may be higher or lower depending on your caloric needs.	

What matters now...

Carbon Facts

Product Size: 1 Cheeseburger (130g)
Serving Size: One Cheeseburger (130g)
Serving Per Container: 1

Total C₂ Energy Sources 443g

Fructose/Glucose 120g
Fossil Fuel (Ethanol) 48g
Fossil Fuel (Gasoline) 48g
Electricity/Propane/Bio 70g
Fossil Fuel (Natural Gas) 70g
Fossil Fuel (Coal) 70g
Other 70g

Total C₂ Non-Energy Sources 2160g/1000g

Sulfur Hexafluoride 819g/1638g/5064g
Methane 25.8g/516g/1608g
Other 2.2g/43g/132g

Carbon Product Ratio 19.7

Localism Rating
Sustainability Production Rating
Overall Carbon Grade: Orange

Nutrition Facts

Serving Size: One Cheeseburger (130g)
Serving Per Container: 1

Amount Per Serving

Calories 710 Calories From Fat: 450

% Daily Value

Total Fat 42g 81%

Saturated Fat 21g 91%

Cholesterol 150g 53%

Sodium 1530mg 59%

Total Carbohydrate 55g 22%

Dietary Fiber 5g 2%

Sugars 11g

Protein 55g

Vitamin A 7% Vitamin C 3%

*Percent Daily Values are based on a 2,000 calorie diet. Your daily values may be higher or lower depending on your caloric needs.

FUTURE: low fat, low salt, low sugar. Local, in season, organic, low carbon healthy menu

Nutrition Facts

Product Size: 1 Vegetable Fries (100g)
Serving Size: One Vegetable Fries (100g)
Serving Per Container: 1

Amount Per Serving

Calories 85

Total Fat 4g 8%

Saturated Fat 1g 2%

Cholesterol 0g 0%

Sodium 100mg 4%

Total Carbohydrate 15g 5%

Dietary Fiber 3g 12%

Sugars 1g

Protein 1g

Vitamin A 2% Vitamin C 2%

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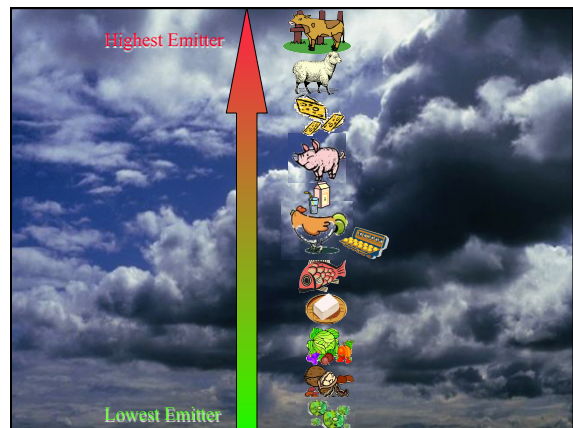
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Carbon Foot print related labels

ISO/TS 14067:2013

- ISO/TS 14067:2013 specifies principles, requirements and guidelines for the quantification and communication of the carbon footprint of a product (CFP), based on International Standards on life cycle assessment (ISO 14040 and ISO 14044) for quantification and on environmental labels and declarations (ISO 14020, ISO 14024 and ISO 14025) for communication.



Our eating habits are harming the planet.



Our Ridiculously Massive Food Waste Is Driving Climate Change

Reducing Food Waste Could Curb Climate Change

A new study predicts that wasted food could increase greenhouse gas emissions by mid-century.



A man picks up oranges at the garbage dump of the La Terminal food centre, in Guatemala City. (Photo: Jorge Dan Lopez/Reuters)




Did you know?

It is estimated that food wasted by the US and Europe could feed the world **three** times over!



Did you know?

- Every tonne of food waste prevented has the potential to save 4.2 tonnes of CO₂ equivalent.
- If we all stop wasting food that could have been eaten, the CO₂ impact would be the equivalent of taking one in four cars off the road.



Food Waste in Hong Kong

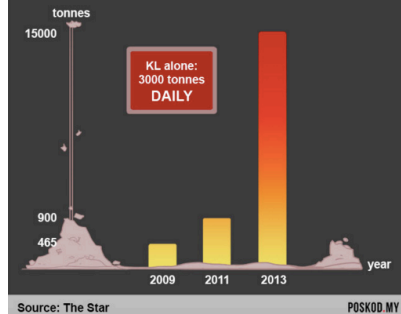
Restaurants in Hong Kong are producing **3,200 tons of leftovers every day** and the Government is spending 2.4 million dollars to deal with the unwanted food!



In Malaysia, 15,000 tons of food being thrown away every day (2013), will increase to 17,000 tons by 2020



FOOD AND KITCHEN WASTE PER DAY IN MALAYSIA



Food wastage in the Gulf states



500 tonnes of food wasted in Abu Dhabi during Ramadan. Abu Dhabi government launches drive to tackle food wastage The 'Think Before You Waste' campaign, which begins Aug 11, 2011 hopes to raise awareness about food waste and its environmental implications.

"Save Food Day" In HK

(1st Wednesday of the Month, consumers asked for 1/3 less rice and get \$1.00 HKD discount)



Poster of "Save Food Day" from Greeners Action

Waste Reduction

250 ARAMARK campus in the US

What they did:

- Removed trays from their residential dining locations to reduce food waste and conserve water and energy.

What they have achieved:

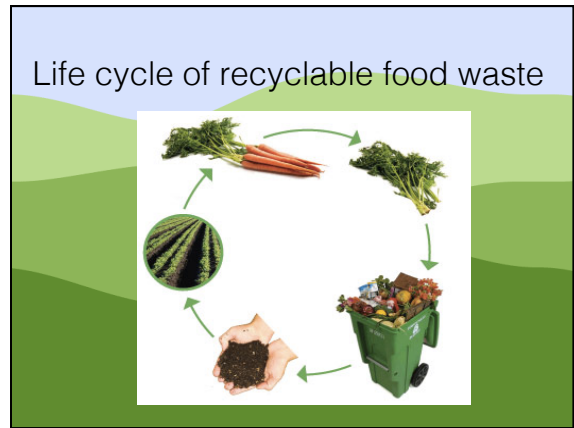
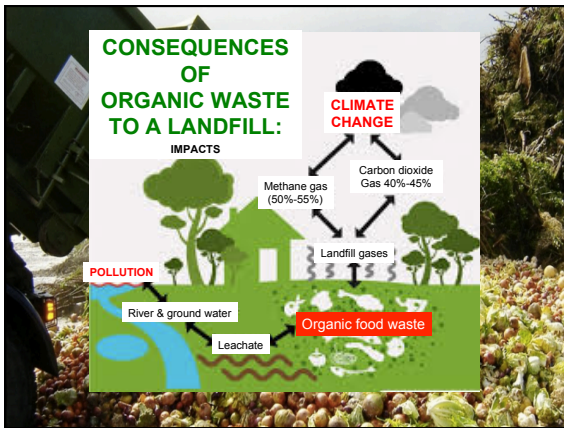
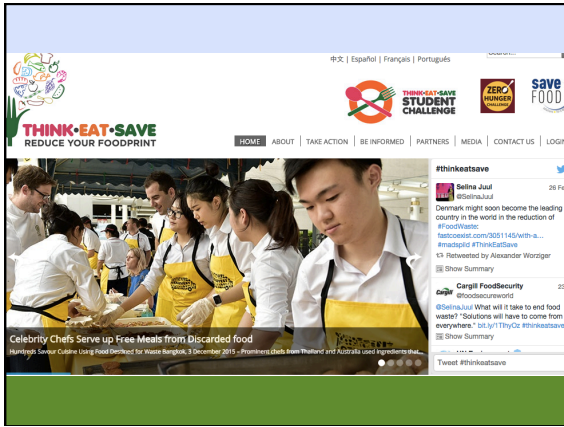
- Food waste reduction of 25 to 30 % per person after trays were removed.
- Armed with a plate instead of a tray, people don't and can't pile on as much food. Meanwhile, the water and energy required to wash trays is eliminated.



Food Programs:

Delivery of leftover eatable foods to local food shelters

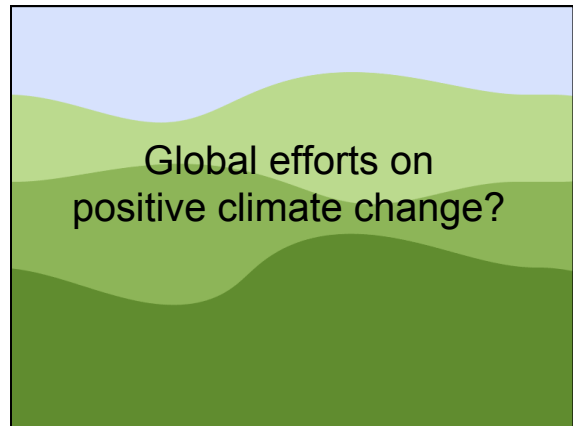
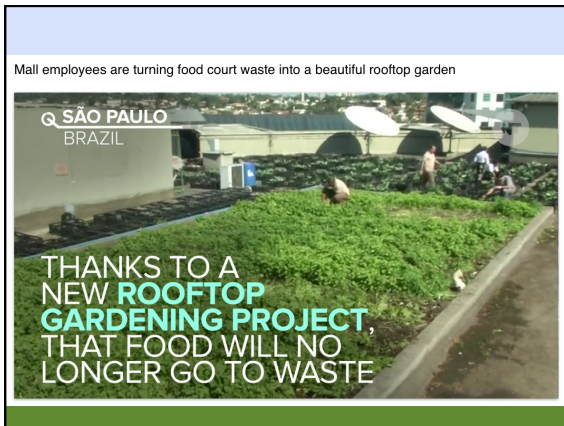




Composter processes in batch or continual feed modes with complete decomposition of food waste typically within twenty four hours into dry odorless dry soil like powder (equipment can handle 80 kg. to 7000 kg per day)

Food Decomposer
Food Waste Recycling, reduce landfills
Saves costs

Turn food waste into compost or turned into eco-safe effluent



Global Warning
The Impact of Meat Production and Consumption on Climate Change

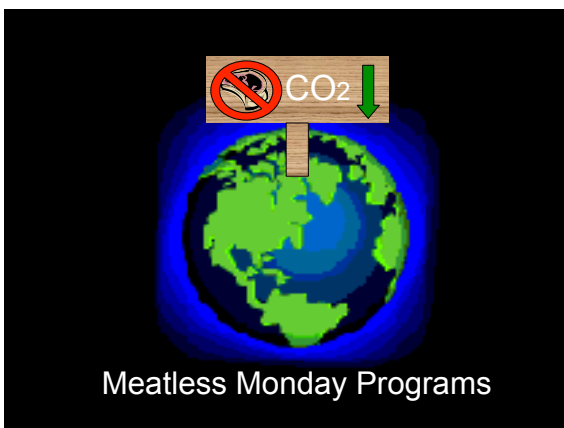
R K Pachauri
Chairman, IPCC
Director-General, TERI

IPCC:
Intergovernmental Panel on Climate Change

London
8th September 2008

IPCC

IPCC Chair Dr. Pauchuri recommended "eat less meat". He suggested to go without meat one day per week, then gradually reduce meat intake. He said: "in terms of immediacy of action and the feasibility of bringing about reductions in a short period of time, it clearly is the most attractive opportunity."



2010 Meatless Monday Program

東區醫院逢周一 供應低碳無肉餐

醫院無肉日

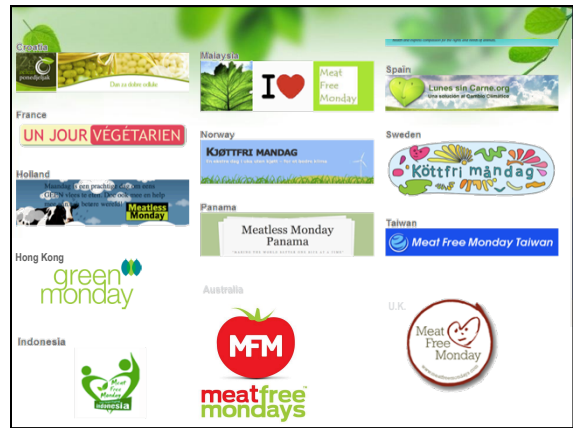
Hospital serves up meatless Mondays for environmental health

Maggie Tam
Frugal cooking - helping power stations and killing diesel engines for a moment and think about what you eat. Diet is the latest target of health and environmental experts striving to cut harmful emissions.

paper they liver citing facts about environmental problems arising from food sources.

Through the programme, the hospital expects to reduce carbon dioxide equivalent and emissions by 40,000 kilograms a year - equal to the average annual emissions of the food produced by 86 Hong Kong people.

It will also save 320 grams of meat per meal and the hospital plans to use that cost saving to add organic link



WHO'S GOING MEATLESS MONDAYS?

- SAB CATERING**
This Dutch catering company has joined the movement by offering meatless items and promotional materials to their restaurants
- Sodexo**
One of the world's largest institutional feeders has officially launched MM in their national network of schools, hospitals, worksites and government agencies.
- PROTEA HOTELS**
Protea Hotel – Victoria Junction
This four-star hotel in Cape Town, South Africa now boasts a set three course Meatless Monday Menu
- SWEDISH HEALTH SERVICES**
This Seattle-based healthcare system offers Meatless Monday meals to 12,000 employees and physicians through their main food service area and network of cafes.
- TU Delft**
Delft University of Technology
Sustainability group Project Helder introduced Meatless Monday at this Dutch University

Other Low Carbon Foodservice Trends...

Low Carbon Buffet at HK Renaissance Harbour View Hotel



Low Carbon Menu & Food Production



Langham Hong Kong has taken shark fins off their banquet menus, now featuring food sustainably sourced from local organic farms

Healthy & Sustainable Cafeterias On Campus of Ivy League Universities



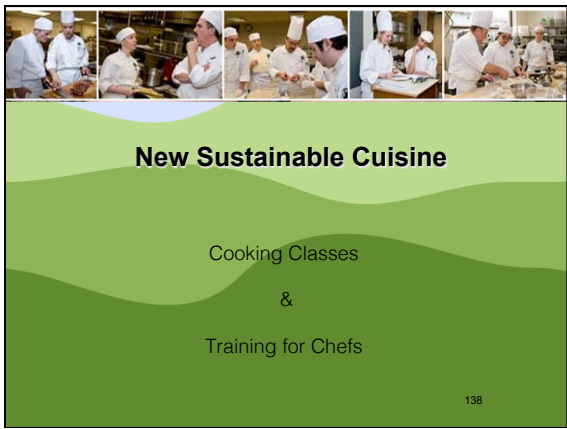
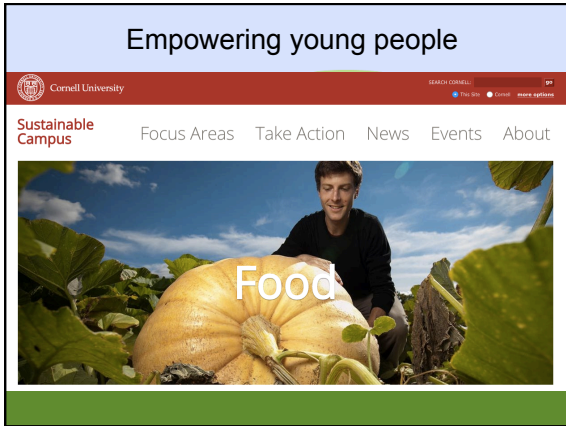
Use of organic ingredients, provide vegetarian meals, compost on-site, efforts in reduction of energy usage & carbon emission... etc.

Yale University canteen serves local organic vegetarian meals as part of their sustainable food program initiatives



UC Berkeley: Organic certified cafeteria





sustainable table serving up healthy food choices

sustainable kitchen culinary schools

As sustainable food becomes more and more popular, cooking schools are beginning to offer classes, or even courses, that focus on sustainable food. Below you will find a few:

REGIONAL

- Arizona Culinary Institute (Scottsdale, AZ)**
The Institute offers classes that tackle issues of sustainability and sustainable agriculture.
- California Culinary Academy (San Francisco, CA)**
CCA doesn't offer specific classes on sustainable food and agriculture. However, many of the chef instructors choose to use sustainable foods and talk about sustainability in their classes.
- Culinary Institute of America (Hyde Park, NY)**
The CIA's culinary arts career program is committed to using as much local produce as possible, including a full herb garden grown right on premises. They also offer occasional recreational classes on sustainable food issues.
- Institute of Culinary Education (New York, NY)**
The Institute doesn't offer regular programs on sustainability, but offers occasional sustainable cuisine classes in partnership with New York-based Earthledge and their Farm to Table program.
- The Natural Gourmet Cookery School (New York, NY)**
The Natural Gourmet Cookery School in New York City

Organic Tuscany

Home | The Cooking Classes | Prices and Calendar | Accommodation | About Us | Where We Are | Contact us

Join us on a week-long organic cooking class in Tuscany

We'll visit local organic farms, learn to cook flavoursome, healthy food using the freshest local seasonal ingredients, and savour the results together, washed down with delicious poddyname wine. Buon appetito!

Cooking courses which explore local traditions

Accommodation will be on a gorgeous, lovingly restored farm which has 6 hectares of olive groves and vineyards. Some of the rooms we will occupy will be frescoed rooms in the oldest stone house, others in a charming...

One-day classes

For those of you who will be in the area and would like to have a little taste of Organic Tuscany, we offer one-day classes from our instructors' delightful villa home in the Chianti region. This makes an ideal day-trip from Florence or Siena.

Reviews on TripAdvisor

Our rating on TripAdvisor based on 23 traveller reviews:

Fairmont rooftop organic herbal gardens + bee hives for organic honey!

The Food and Climate Connection in Health Care Food Service

Healthy Food in Health Care

What can we learn from this model?

Balanced Menus

Serve healthy food.
Mitigate climate change.
Reduce costs.


The Food and Climate Connection in Health Care Food Service

Balanced Menus

Serve healthy food.
Mitigate climate change.
Reduce costs.

Balanced Menus

- Balanced Menu is a systematic approach to **reduce the amount of meat protein by 20%** in hospital food
- Reduce reliance on higher priced pre-cooked, processed meat items
- to serve the healthiest, most sustainable produced meat available




ISSUES
Healthy Food Systems


Reducing amount of meat served on patient menus can offer cost savings as well as concrete public and environmental health benefits!



 **World Health Organization**
Healthcare Without Harm
Promotes "Balanced Menu"


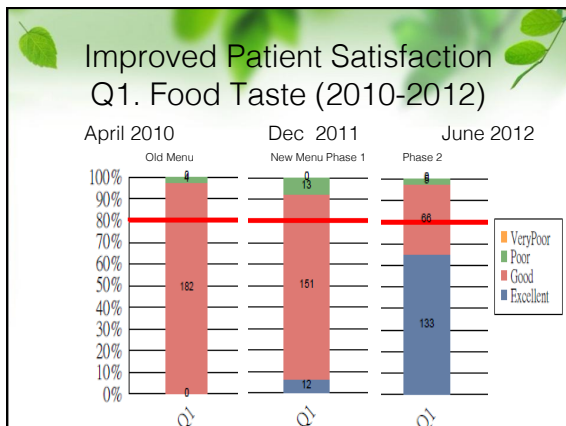
"Balanced Menu" for Patients (PYNEH, Sept 2011)

- Removed large meat items such as pork chop and chicken legs from menu
- Increased vegetable portions, maintain adequate protein content
- Addition of Non-GM soy products and organic vegetables
- Included vegan congee choice at breakfast, also replaced few meat congee with whole grain congee



DCMS Recipe Database Standard: Assurance of Nutritional Adequacy

(eg. for 3 meat exchange: 17gm – 25gm protein per portion)





2006-2012 Summary of PYNEH Low Carbon Initiatives

Average Annual Reductions (PYN only)				
	Meat	Meatless	Balanced	
	Replacemen	Monday	Menu	
Program	Program	Program	Program	TOTAL
Meat (kg)	6,318.67	18,720.00	11,232.00	36,270.67
% Meat	5%	15%	12%	27.60%
CO2e(Kg)	30,077	60,971	36,583	127,631

Annual HKD savings: 120,966 75,200* 445,280 641,446

* Use of organic vegetables



Achievement in Sustainable Healthcare Foodservice

2006
以素代肉 健康環保
Improved food quality
Reduced carbon emission
Reduced food cost

2010
低碳飲食救地球
東區醫院連周一供應低碳無肉餐

2011-12
Community service
Food waste Reduction
Improved patient satisfaction, reduced carbon emission
Reduced carbon emission
Raise public awareness



KAISER PERMANENTE

In 2013, Kaiser Permanente, the largest US managed care organization (9.3 million health plan members, 167,300 employees, 14,600 physicians, 37 medical centers and 611 medical offices) published patient education materials to help make plant-based diets the "new norm" for patients and physicians...

ORIGINAL RESEARCH & CONTRIBUTIONS
Special Report
Nutritional Update for Physicians: Plant-Based Diets

Philip J. Teas, MD, Mohamed H. Ismail, MD, Benjamin P. He, MD, Candice Barabotto, MA, RD

Abstract
The objective of this article is to present to physicians an update on plant-based diets. Concerns about the rising cost of health care and being valued nationwide, even as healthy lifestyles are contributing to the spread of obesity, diabetes, and cardiovascular disease. For these reasons, physicians looking for cost-effective interventions to improve health outcomes are becoming more involved in helping their patients adopt healthier lifestyles. Healthy eating may be best achieved with a plant-based diet, which was defined as a regimen that encourages whole, plant-based foods and discourages meat, dairy products, and even as well as all refined and processed foods. We present a case study...





Welcome to Giant Suntec City

We are proud to be the first hypermarket in Singapore to be awarded the **BCA Green Mark Gold^{PLUS} Award 2013**

Take your time to explore our store as it is specially equipped with a number of energy efficient and green features.

- Electronically commutated (EC) fans for all refrigerated equipment
- 100% Energy efficient LED for lighting and all refrigeration equipment
- Eco food waste digester equipment
- 85% of chillers and freezers are enclosed
- Energy Monitoring System

We believe you can also play a part in protecting our environment. Together, let us create **a greener future** for Singaporeans to live in.

Do you know what is your eco-burden on our planet??

How to off-set carbon emissions?

Plant trees !!

1 tree(40 yr) = 400 Kg-700 Kg CO₂

Your annual carbon footprint?

How many tons?
How many trees to off-set?

Calculate own carbon footprint?

<www.earthlab.com>

ECP * CARBON (Tons)/Year

MY SCORE	246	7.3 (10 trees to off-set)
(minus air travels)	163	1.2
CHINA	310	11.8
US	357	15.4

*ECP= Earth Conservation Plan Score

FCSI APD Tree Planting Program



A Carbon Offset Program



FCSI APD annual tree planting program began in 2008...



2011 FCSI Tree Planting Program
New planting site
Inner Mongolia Northwestern Region

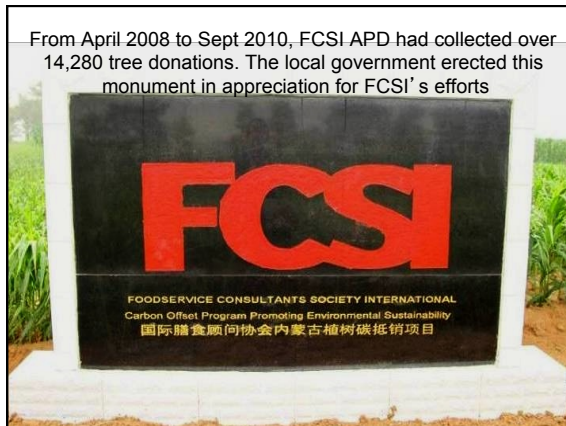
April 2011 FCSI APD Tree Planting Trip



To halt sandstorms at the source!







FCSI Asia Pacific Tree Planting Program in Inner Mongolia 2016

For more information on FCSI's efforts to offset carbon emissions through our Tree Planting Program, please visit www.fcsi.org

Please indicate the number of trees you like would like to donate and pledge through the FCSI APD Tree Planting Program with USD 15.00 (USD 2.00) to pledge one tree to offset about one ton CO₂.

Additional donations for water wells, tree research program, Bio-Fuel plants, etc. USD

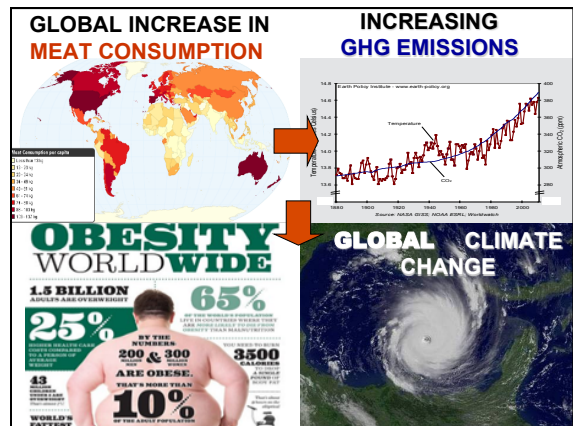
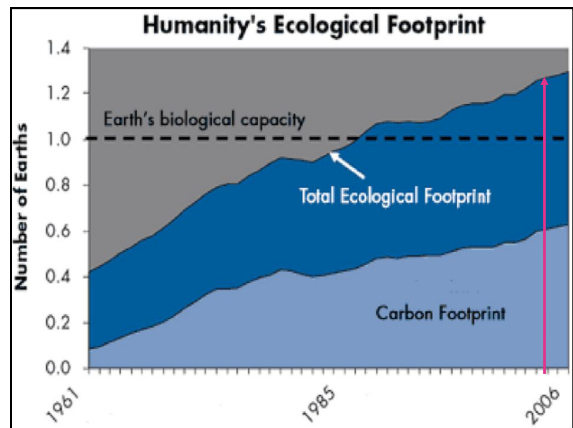
Your Donations do Hong Kong dollars? The amount is not a local money change.

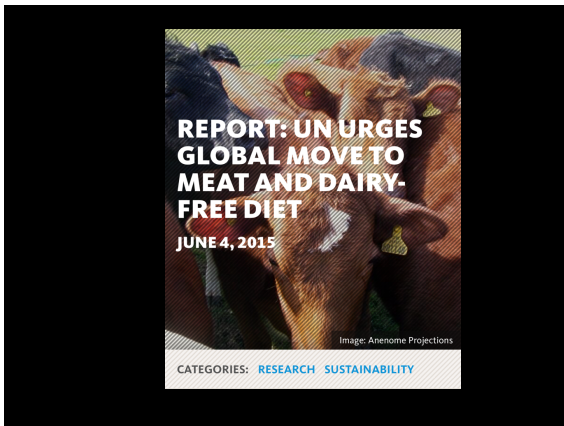
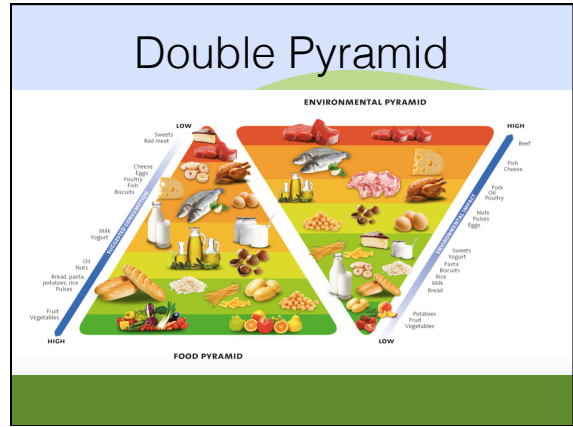
Your tree donations come with complimentary tree certificates. Please indicate below names or organizations to appear on the tree certificates, plus any special messages to be included (not more than 15 words). Name on tree planting certificate (optional message)

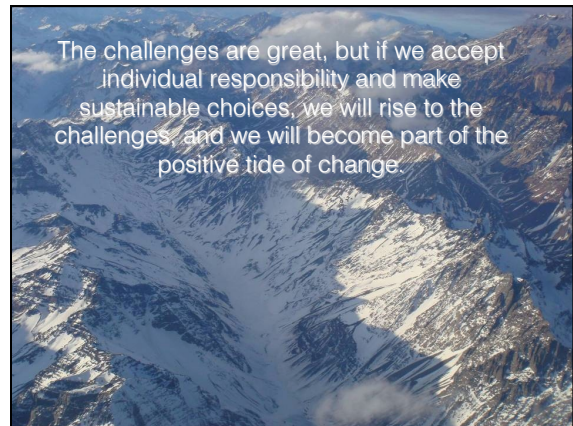
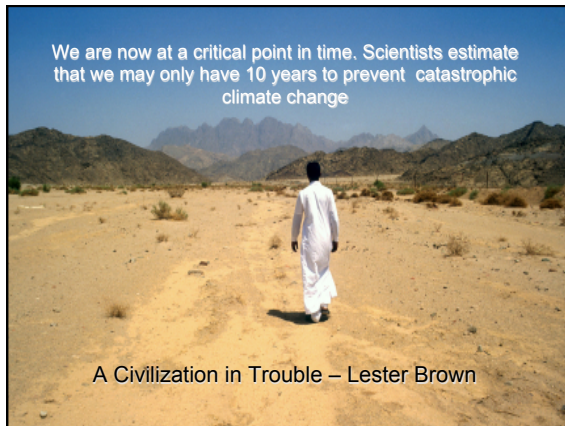
Contact Name: _____ E-Mail: _____
 Phone: _____ Fax: _____
 Company Address: _____ Postal Code: _____ Country: _____
 City: _____ State/Province: _____ Postal Code: _____ Country: _____
 Certificate mailing address (if different from above):
 City: _____ State/Province: _____ Postal Code: _____ Country: _____

Payment Information
 Payment with Bank Draft or Bank Transfer Bank transfer Bank draft
 Bank draft invoice will be mailed to you. Please provide your bank information to asia@fcsi.org and mailed to:
 Tree Planting Program
 FCSI Asia Pacific, Canton
 Suite 501, Level 5
 The Hong Kong Club Building
 Bank: HSBC, Hong Kong
 A/C Name: Foodservice Consultants Society International - Asia Pacific
 A/C Number: 084 110 527753 001
 Swift Code: HSKC33330000

Credit Card Payment Visa MasterCard
 Contribution Amount in local currency USD
 Contributor: _____ Age: _____



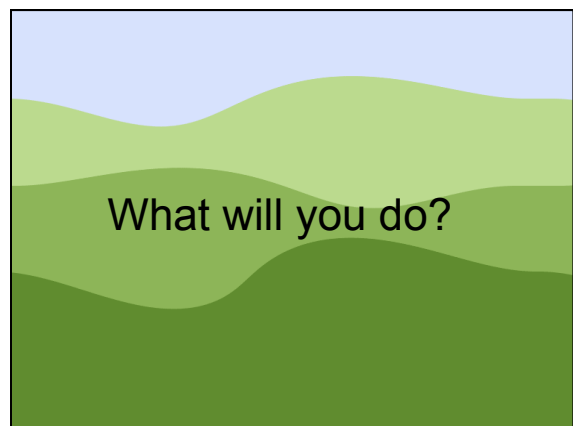





Saving civilization is not a spectator sport.
– Lester R. Brown

What You Can Do:

- Calculate your own carbon footprint
- Educate yourself on environmental issues
- Spread the word
- Take action in an area that is important to you
- Advise your clients on low carbon foods
- Join/donate to tree planting programs
- ...etc






FOODSERVICE CONSULTANTS SOCIETY INTERNATIONAL

Action Pledge

I, _____ on this date: **12 April 2016**, pledge to take action on reducing carbon emission:- to mitigate climate change and to secure our resources by the following actions:

- Calculate and monitor own carbon footprint
- Assist clients in calculating carbon footprint
- Reduce waste, energy and water at home and at work
- Advise clients on reducing energy, water and waste
- Drive less, use more public transportation
- Modify food consumption pattern in self (low carbon foods)
- Advise and help plan low carbon menus for clients
- Plant/donate trees to offset carbon emissions
- Influence clients, colleagues, friends and family members
- Others _____

Signature: _____


 


“You cannot have well humans on a sick planet” Thomas Berry



Thomas Berry is a leading American writer about the role of humanity and our relationship with the Earth and the Universe



 **Climate and Health News Service**



New Zealand:
Climate Change Increases Risk of Infectious Diseases

USA:
Doctors Prepare to Explain and Treat Climate-Related Symptoms

England:
Study: Climate Change Could Spread Disease

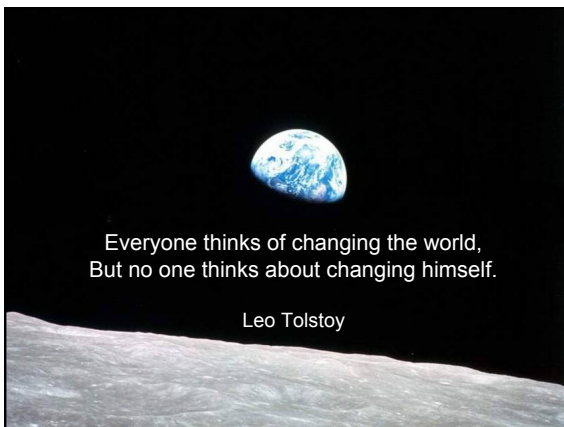
Korea:
Scientists Link Cholera Outbreaks and Climate Change

 **ISSUES Healthy Food Systems**





Let's prescribe a low carbon diet for the health of our planet !!



Everyone thinks of changing the world,
But no one thinks about changing himself.

Leo Tolstoy



“We must BECOME the change we want to see...”

Mohandas Karamchand Gandhi
(1869-1948)



