Green Mission News

May 2012 Green Mission News

External Article Links:

- Product Stewardship, Extended Product Responsibility and Sustainable Strategic Advantage
http://www.hspiconsortium.com/blog/product-stewardship-extended-product-responsibility-and-sustainable-strateg

- Farmers, Scientists Protest USDA Approval Of Dow's 'Agent Orange Corn'
http://www.ibtimes.com/articles/334483/20120427/farmers-scientists-protest-2-4-d-herbicide.htm

- Exploring the Global Food Supply Chain Markets, Companies, Systems
http://www.3dthree.org/pdf_3D/3D_ExploringtheGlobalFoodSupplyChain.pdf

- State of the World 2012: Moving Toward Sustainable Prosperity
http://blogs.worldwatch.org/sustainableprosperity/sow2012/

- Farm Bill 2012: It’s a mess, but it’s our mess
http://grist.org/farm-bill/farm-bill-2012-its-a-mess-but-its-our-mess/

- Sustainable Food Trade Association Metrics
www.sustainablefoodtrade.org/metrics/

- Critical Soil Issues
www.symphonyofthesoil.com/learn-more/issues/

- BEE CONSERVATION: Time to act
http://www.xperedon.com/news_1211

- Pollinator Conservation
http://www.xerces.org/pollinator-conservation/

- Farm Bill 101: Pick a Food Fight!
http://civileats.com/2012/04/23/farm-bill-101-pick-a-food-fight/

- Bio-economy Versus Biodiversity
http://globalforestcoalition.org/wp-content/uploads/2012/04/Bioecono-vs-biodiv-report-with-frontage-FINAL.pdf

- Ken Robinson on modern education (RSA animated; 12 mins.)
http://www.youtube.com/watch?v=zDZFcDGpL4U

- People and the planet
http://royalsociety.org/policy/projects/people-planet/

- Circular metabolism: turning regenerative cities into reality
http://globalurbanist.com/2012/04/24/circular-metabolism-oakland

- The Natural Step explained in 48 minutes
http://inaweeveryday.blogspot.com/2012/04/natural-step-explained-in-48-minutes.html

- Greenwashing Walmart
http://www.corpwatch.org/article.php?id=15707

- If the foods in plastic, what's in the food?
http://www.washingtonpost.com/national/health-science/trace-chemicals-in-everyday-food-packaging-cause-worry-over-cumulative-threat/2012/04/16/gIQAUILvMT_story.html

- Our Chemical Cocktail Evaluated in New Report
http://civileats.com/2012/04/17/our-chemical-cocktail-evaluated-in-new-report/

- CRADLE Goes Live
http://www.cradle2.org/2012/04/cradle-goes-live-on-earth-day/

- Problem: Our Take, Make, Waste Economy
http://www.cradle2.org/2012/04/problem-our-unsustainable-economy/

- Ocean Salinities Reveal Strong Global Water Cycle Intensification During 1950 to 2000
http://www.sciencemag.org/content/336/6080/455.abstract

- Free Your (Eco) Mind
by Frances Moore Lappe
http://www.commondreams.org/view/2012/04/20-10
http://www.yesmagazine.org/issues/9-strategies-to-end-corporate-rule/free-your-eco-mind

- RIO 2012: a conversation on the future of plastic
http://www.plasticityforum.com/

- Combatting Monsanto Grassroots resistance to the power of agribusiness in the era of the green economy and a changing climate
http://viacampesina.org/downloads/pdf/en/Monsanto-Publication-EN-Final-Version.pdf

- Bio-based plastics are not necessarily sustainable
http://www.recyclingportal.eu/artikel/28503.shtml

- The Folly of Big Agriculture: Why Nature Always Wins
http://e360.yale.edu/feature/the_folly_of_big_agriculture_why_nature_always_wins/2514/

- Muhammad Yunus Named One Of 'Fortune' Magazine's 12 Greatest Entrepreneurs
http://www.huffingtonpost.com/2012/04/04/muhammad-yunus-fortune-magazine_n_1403458.html

- Greenwashed: Bioplastic packaging may be more hype than help
http://this.org/magazine/2012/04/19/greenwashed-bioplastic-packaging-may-be-more-hype-than-help/
{ED.: well researched article; although I'm not sure that BPI's "compostable" is received at all commercial composters equally; more than a few have different standards for input, and will reject some BPI certified products.}

- The Time Is Ripe For Brooklyn Rooftop Farms
http://thebrooklynink.com/2012/04/05/44045-the-time-is-ripe-for-brooklyn-rooftop-farms/

Exposure to Pesticides:

- Associations of Prenatal Exposure to Organophosphate Pesticide Metabolites with Gestational Age and Birth Weight

http://ehp03.niehs.nih.gov/article/fetchArticle.action?articleURI=info%3Adoi%2F10.1289%

- **New Study Is First to Show That Pesticides Can Induce Morphological Changes in Vertebrate Animals**, Says Pitt Researcher

> 'When exposed to the popular herbicide Roundup, tadpoles change shape in ways that are normally induced by predators.'

http://www.news.pitt.edu/Pesticides_MOrph

University of Pittsburgh, March 30 2012

- You are what you eat? (22 minutes; 5 people talking)
http://upwithchrishayes.msnbc.msn.com/_news/2012/04/07/11073988-you-are-what-you-eat

- Catching up to the Local Food Revolution
Why do Government policies and spending primarily support (subsidize) industrialized agriculture and the giant farms and corporations that profit from it?

http://www.otherwords.org/articles/catching_up_to_the_local_food_revolution

- The problem with carbon offsets.
http://www.nature.com/news/the-inconvenient-truth-of-carbon-offsets-1.10373

- Exporting Obesity: How U.S. farm and trade policy is transforming the Mexican food environment
http://www.iatp.org/documents/exporting-obesity

- How Corporate America Might Just Save Recycling
http://www.forbes.com/sites/amywestervelt/2012/04/27/how-corporate-america-might-just-save-recycling/

- Pink Slime and Mad Cow Just the Tip of the Iceberg
http://civileats.com/2012/04/27/pink-slime-and-mad-cow-just-the-tip-of-the-iceberg/

- Nelson Escobar coordinates a large urban farm (5 minutes)
http://www.theperennialplate.com/episodes/2012/04/episode-101-la-minga/

- As America's waistline expands, costs soar
http://www.reuters.com/article/2012/04/30/us-obesity-idUSBRE83T0C820120430

Full Length Articles Below:

- Autism and Disappearing Bees: A Common Denominator?

- Are Pesticide Sprayers 'Health Experts?' Seriously?

- Getting the Market to Tell Ecological Truths

- Why Trees are Important

- Fungus threat escalates for food, wildlife

-Group pushes U.N. to define zero waste

# # #

Published on Monday, April 2, 2012

Autism and Disappearing Bees: A Common Denominator?

http://www.commondreams.org/view/2012/04/02

by Brian Moench

A few days ago the Salt Lake Tribunes front page headline declared, "Highest rate in the nation, 1 in 32 Utah boys has autism." This is a national public health emergency, whose epicenter is Utah, Gov. Herbert. A more obscure story on the same day read: "New pesticides linked to bee population collapse." If you eat food, and hope to do so in the future, this is another national emergency, Pres. Obama. A common denominator may underlie both headlines.

A Stanford University study with 192 pairs of twins, with one twin autistic and one not, found that genetics accounts for 38% of the risk of autism, and environmental factors account for 62%.

Supporting an environmental/genetic tag team are other studies showing autistic children and their mothers have a high rate of a genetic deficiency in the production of glutathione, an anti-oxidant and the body's primary means of detoxifying heavy metals. High levels of toxic metals in children are strongly correlated with the severity of autism. Low levels of glutathione, coupled with high production of another chemical, homocysteine, increase the chance of a mother having an autistic child to one in three. That autism is four times more common among boys than girls is likely related to a defect in the single male X chromosome contributing to anti-oxidant deficiency. There is no such thing as a genetic disease epidemic because genes don't change that quickly. So the alarming rise in autism must be the result of increased environmental exposures that exploit these genetic defects.

During the critical first three months of gestation a human embryo adds 250,000 brain cells per minute reaching 200 billion by the fifth month. There is no chemical elixir that improves this biologic miracle, but thousands of toxic substances can cross the placenta and impair that process, leaving brain cells stressed, inflamed, less well developed, fewer in number and with fewer connections with each other all of which diminish brain function. The opportunity to repair the resulting deficits later on is limited.

The list of autism's environmental suspects is long and comes from many studies that show higher rates of autism with greater exposure to flame retardants, plasticizers like BPA, pesticides, endocrine disruptors in personal care products, heavy metals in air pollution, mercury, and pharmaceuticals like anti-depressants. (Utah's highest in the nation autism rates are matched by the highest rates of anti-depressant use and the highest mercury levels in the country in the Great Salt Lake).

Doctors have long advised women during pregnancy to avoid any unnecessary consumption of drugs or chemicals. But as participants in modern society we are all now exposed to over 83,000 chemicals from the food we eat, the water we drink, the air

we breathe and the consumer products we use. Pregnant women and their children have 100 times more chemical exposures today than 50 years ago. The average newborn has over 200 different chemicals and heavy metals contaminating its blood when it takes its first breath. 158 of them are toxic to the brain. Little wonder that rates of autism, attention deficit and behavioral disorders are all on the rise.

How does this relate to vanishing bees and our food supply? Two new studies, published simultaneously in the journal *Science*, show that the rapid rise in use of insecticides is likely responsible for the mass disappearance of bee populations. The world's food chain hangs in the balance because 90% of native plants require pollinators to survive. The brain of insects is the intended target of these insecticides. They disrupt the bees homing behavior and their ability to return to the hive, kind of like bee autism. But insects are different than humans, right? Human and insect nerve cells share the same basic biologic infrastructure. Chemicals that interrupt electrical impulses in insect nerves will do the same to humans. But humans are much bigger than insects and the doses to humans are miniscule, right?

During critical first trimester development a human is no bigger than an insect so there is every reason to believe that pesticides could wreak havoc with the developing brain of a human embryo. But human embryos aren't out in corn fields being sprayed with insecticides, are they? A recent study showed that every human tested had the world's best selling pesticide, Roundup, detectable in their urine at concentrations between five and twenty times the level considered safe for drinking water.

The autism epidemic and disappearing bees are real public health emergencies created by allowing our world to be overwhelmed by environmental toxins. Environmental protection is human protection, especially for the smallest and most vulnerable among us.

Dr. Brian Moench is President of Utah Physicians for a Healthy Environment and a member of the Union of Concerned Scientists. He can be reached at: drmoench@yahoo.com

# # #

Published on Tuesday, April 10, 2012 by Enviroblog / Environmental Working Group

Are Pesticide Sprayers 'Health Experts?' Seriously?

by Alex Formuzis

New online videos from a chemical agribusiness front group show conventional growers straining to convince consumers that it's just fine to eat bug killers and weed killers. The Alliance for Food and Farming, or AFF, which has lobbied the U.S. Department of Agriculture to tone down its annual pesticide residue tests on fruits and vegetables, has rolled out short videos in which California farmers answer questions usually reserved for

scientists and health experts.

Among AFF's unsupported claims:

Is organic farming better for the environment than conventional farming?
AFF says: No. Rod Braga, a vegetable farmer from Soledad, Calif., says conventional agriculture is actually "very much easier on the environment."

Truth: The environmental benefits of organic agriculture far outweigh any offered up by conventional operations. Conventional farmers apply more than one billion pounds of highly toxic manmade pesticides and fungicides each year. These chemicals pollute not only the food supply but also air, drinking water and ultimately people's bodies. They have been found in the umbilical cord blood of newborns. Chemical fertilizer runoff from Midwest crop operations has introduced so much nitrate into the Mississippi River that the Gulf of Mexico has a Dead Zone the size of New Jersey literally chocking off aquatic life. Mega-farms throughout the country have also played a significant role in greenhouse gas emissions.

Are pesticides used in organic farming different from those used in conventional farming?
AFF: Not really. Grape and blueberry farmer Jon Marthedal of Fresno, Calif., contends that pesticides used on conventional agriculture are "really just synthetic versions of the organic compounds we use in our organic operations."

Truth: The U.S. has never banned or restricted the use of any organic pest control chemical because of potential risks to human health or the environment. Not one. However, dozens of conventional pesticides have been banned or their uses severely restricted by the U.S. Environmental Protection Agency for several reasons, including health and environmental risks.

Is organic produce healthier than conventionally grown produce?
AFF: Nope. Marthedal dismisses the question as, "Do I want to drive a Chevy, or do I want to drive a Ford?"

Truth: A study published in September 2010 by scientists at Washington State University found that organically grown strawberries from California not only tasted better but also provided more nutrients than those grown with synthetic pesticides.

Jane Black wrote in The Washington Post:
A new study of 13 pairs of conventional and organic California strawberry farms over two seven-month growing seasons in 2004 and 2005 revealed that organic farms produced more flavorful and nutritious berries while leaving the soil more healthful and genetically diverse. In a surprising twist, the organic strawberries also had a longer shelf life than the other varieties.

Should I be worried about pesticide residues on my fruits and vegetables?
AFF: No. In tackling this question, farmer Marthedal said he and his family have farmed

the same land for 100 years while spraying pesticides on their crops.

Truth: Dietary exposures to pesticides, particularly for children and babies in the womb, may cause adverse health effects including neurologic impairments and low birth weight. Last year, three separate studies arrived at similar conclusions: Prenatal pesticide exposure is linked to diminished IQ.

Other health problems that have been linked to low-dose exposure to pesticides include disruption of the hormonal system, lower levels of testosterone and other hormones, leukemia, lymphoma and Parkinson's disease.

In announcing these new videos defending pesticides on produce, AFF executive director Marilyn Dolan said, *"Who better to talk with consumers about how fruits and vegetables are grown than the farmers of these products themselves?"*
When I want an expert opinion on whether or not I should drink or smoke, I don't ask the owner of the local liquor store if the cigarettes and bourbon he's peddling are safe for my health.

The answers given by these farmers are riddled with half-truths, misleading statements and outright falsehoods.

Just last month Arysta LifeScience, the maker of a toxic pesticide used primarily by California and Florida strawberry growers, decided to pull one of its signature products, methyl iodide, from the market. The company acted under pressure calls for a ban from the public, leading scientific and public health experts and farmworkers. Members of the AFF fought a ban every step of the way.

The same crew took a similar stance when the predecessor to methyl iodide, methyl bromide, was being phased out for depleting the ozone layer. Representatives of the strawberry and tomato growers - the two crops that used the highly toxic pesticide - gained exemptions from the 1992 international agreement, commonly called the Montreal Protocol, which set in motion a worldwide effort to phase out all ozone depleting chemicals by 2000. Agribusiness vigorously opposed the methyl bromide ban. The United States is the only industrial country still using the fumigant, with 1.7 million pounds applied in California during the latest reporting year available, 2010, courtesy of the state's Department of Pesticide Regulation.

When chemical-dependent agriculture takes a page from the "All is well!" scene from Animal House and tries to persuade you that pesticides in our food and environment are perfectly fine, just remember who is delivering that message.

Alex Formuzis is vice president of media relations for Environmental Working Group.

# # #

Published on Wednesday, April 11, 2012 by Inter Press Service

Getting the Market to Tell Ecological Truths

by Lester Brown

Moving the global economy off its current decline-and-collapse path depends on reaching four goals: stabilizing climate, stabilizing population, eradicating poverty, and restoring the economy's natural support systems.

These goals - comprising what the Earth Policy Institute calls 'Plan B' to save civilization - are mutually dependent. All are essential to feeding the world's people. It is unlikely that we can reach any one goal without reaching the others.

The key to restructuring the economy is to get the market to tell the truth through full-cost pricing. If the world is to move onto a sustainable path, we need economists who will calculate indirect costs and work with political leaders to incorporate them into market prices by restructuring taxes.

This will require help from other disciplines, including ecology, meteorology, agronomy, hydrology, and demography. Full-cost pricing that will create an honest market is essential to building an economy that can sustain civilization and progress.

For energy specifically, full-cost pricing means putting a tax on carbon to reflect the full cost of burning fossil fuels and offsetting it with a reduction in the tax on income. Some 2,500 economists, including nine Nobel Prize winners in economics, have endorsed the concept of tax shifts.

Harvard economics professor and former chairman of George W. Bush's Council of Economic Advisors N. Gregory Mankiw wrote in Fortune magazine: "Cutting income taxes while increasing gasoline taxes would lead to more rapid economic growth, less

traffic congestion, safer roads, and reduced risk of global warming- all without jeopardizing long-term fiscal solvency. This may be the closest thing to a free lunch that economics has to offer."

The failure of the market to reflect total costs can readily be seen with gasoline. The most detailed analysis available of gasoline's indirect costs is by the International Center for Technology Assessment.

If we can get the market to tell the truth, to have market prices that reflect the full cost of burning gasoline or coal, of deforestation, of overpumping aquifers, and of overfishing, then we can begin to create a rational economy.
When added together, the many indirect costs to society - including climate change, oil industry tax breaks, military protection of the oil supply, oil industry subsidies, oil spills, and treatment of auto exhaust-related respiratory illnesses -total roughly 12 per dollars gallon. That is on top of the price paid at the pump. These are real costs. Someone bears them. If not us, our children.

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If we can create an honest market, then market forces will rapidly restructure the world energy economy. Phasing in full-cost pricing will quickly reduce oil and coal use. Suddenly wind, solar, and geothermal will become much cheaper than climate-disrupting fossil fuels.

If we leave costs off the books, we risk bankruptcy. A decade ago, a phenomenally successful company named Enron was frequently on the covers of business magazines. It was, at one point, the seventh most valuable corporation in the United States.
But when some investors began raising questions, Enron's books were audited by outside accountants. Their audit showed that Enron was bankrupt - worthless. Its stock that had been trading for over 90 dollars a share was suddenly trading for pennies. Enron had devised some ingenious techniques for leaving costs off the books. We are doing exactly the same thing, but on a global scale. If we continue with this practice, we too will face bankruptcy.

Another major flaw in our market economy is that it neither recognizes nor respects sustainable yield limits of natural systems. Consider, for example, the over-pumping of aquifers. Once there is evidence that a water table is starting to fall, the first step should be to ban the drilling of new wells.

If the water table continues to fall, then water should be priced at a rate that will reduce its use and stabilize the aquifer. Otherwise, there is a "race to the bottom" as wells are drilled ever deeper. When the aquifer is depleted, the water-based food bubble will burst, reducing harvests and driving up food prices.

Enron had devised some ingenious techniques for leaving costs off the books. We are doing exactly the same thing, but on a global scale. If we continue with this practice, we too will face bankruptcy.
Or consider deforestation. Proper incentives, such as a stumpage tax for each tree cut, would automatically shift harvesting from clear-cutting to selective cutting, taking only the mature trees and protecting the forests.

Not only do we distort reality when we omit costs associated with burning fossil fuels from their prices, but governments actually subsidize their use, distorting reality even further. Worldwide, subsidies that encourage the production and use of fossil fuels add up to roughly 500 billion dollars per year, compared with less than 70 billion dollars for renewable energy, including wind, solar, and biofuels.

Governments are shelling out nearly 1.4 billion dollars per day to further destabilize the earth's climate.

Shifting subsidies to the development of climate-benign energy sources such as wind, solar, and geothermal power will help stabilize the earth's climate. Moving subsidies from road construction to high- speed intercity rail construction could increase mobility, reduce travel costs, and lower carbon emissions.

We are economic decision-makers, whether as corporate planners, government policymakers, investment bankers, or consumers. And we rely on the market for price signals to guide our behavior. But if the market gives us bad information, we make bad decisions, and that is exactly what has been happening.

We are currently being blindsided by a faulty accounting system, one that will lead to bankruptcy. As Stein Dahle, former vice president of Exxon for Norway and the North Sea, has observed: "Socialism collapsed because it did not allow the market to tell the economic truth. Capitalism may collapse because it does not allow the market to tell the ecological truth."

**Adapted from World on the Edge by Lester R. Brown. Full book available online at www.earth-policy.org/books/wote.*

Lester R Brown is president of the Earth Policy Institute and the author of Plan B 4.0: Mobilizing to Save Civilization.

# # #

Why Trees are Important

For Op-Ed, follow @nytopinion and to hear from the editorial page editor, Andrew Rosenthal, follow @andyrNYT.

TREES are on the front lines of our changing climate. And when the oldest trees in the world suddenly start dying, it's time to pay attention.

North Americas ancient alpine bristlecone forests are falling victim to a voracious beetle and an Asian fungus. In Texas, a prolonged drought killed more than five million urban shade trees last year and an additional half-billion trees in parks and forests. In the Amazon, two severe droughts have killed billions more.

The common factor has been hotter, drier weather.

We have underestimated the importance of trees. They are not merely pleasant sources of shade but a potentially major answer to some of our most pressing environmental problems. We take them for granted, but they are a near miracle. In a bit of natural alchemy called photosynthesis, for example, trees turn one of the seemingly most insubstantial things of all sunlight into food for insects, wildlife and people, and use it to create shade, beauty and wood for fuel, furniture and homes.

For all of that, the unbroken forest that once covered much of the continent is now shot through with holes.

Humans have cut down the biggest and best trees and left the runts behind. What does that mean for the genetic fitness of our forests? No one knows for sure, for trees and forests are poorly understood on almost all levels. It's embarrassing how little we know, one eminent redwood researcher told me.

What we do know, however, suggests that what trees do is essential though often not obvious. Decades ago, Katsuhiko Matsunaga, a marine chemist at Hokkaido University in Japan, discovered that when tree leaves decompose, they leach acids into the ocean that help fertilize plankton. When plankton thrive, so does the rest of the food chain. In a campaign called Forests Are Lovers of the Sea, fishermen have replanted forests along coasts and rivers to bring back fish and oyster stocks. And they have returned.
Trees are nature's water filters, capable of cleaning up the most toxic wastes, including explosives, solvents and organic wastes, largely through a dense community of microbes around the trees roots that clean water in exchange for nutrients, a process known as phytoremediation. Tree leaves also filter air pollution. A 2008 study by researchers at Columbia University found that more trees in urban neighborhoods correlate with a lower incidence of asthma.

In Japan, researchers have long studied what they call forest bathing. A walk in the woods, they say, reduces the level of stress chemicals in the body and increases natural killer cells in the immune system, which fight tumors and viruses. Studies in

inner cities show that anxiety, depression and even crime are lower in a landscaped environment.

Trees also release vast clouds of beneficial chemicals. On a large scale, some of these aerosols appear to help regulate the climate; others are anti-bacterial, anti-fungal and anti-viral. We need to learn much more about the role these chemicals play in nature. One of these substances, taxane, from the Pacific yew tree, has become a powerful treatment for breast and other cancers. Aspirins active ingredient comes from willows. Trees are greatly underutilized as an eco-technology. Working trees could absorb some of the excess phosphorus and nitrogen that run off farm fields and help heal the dead zone in the Gulf of Mexico. In Africa, millions of acres of parched land have been reclaimed through strategic tree growth.

Trees are also the planets heat shield. They keep the concrete and asphalt of cities and suburbs 10 or more degrees cooler and protect our skin from the suns harsh UV rays. The Texas Department of Forestry has estimated that the die-off of shade trees will cost Texans hundreds of millions of dollars more for air-conditioning. Trees, of course, sequester carbon, a greenhouse gas that makes the planet warmer. A study by the Carnegie Institution for Science also found that water vapor from forests lowers ambient temperatures.

A big question is, which trees should we be planting? Ten years ago, I met a shade tree farmer named David Milarch, a co-founder of the Champion Tree Project who has been cloning some of the worlds oldest and largest trees to protect their genetics, from California redwoods to the oaks of Ireland. These are the supertrees, and they have stood the test of time, he says.

Science doesnt know if these genes will be important on a warmer planet, but an old proverb seems apt. When is the best time to plant a tree? The answer: Twenty years ago. The second-best time? Today.

Jim Robbins is the author of the forthcoming book The Man Who Planted Trees.

# # #

Fungus threat escalates for food, wildlife

Agence France-Presse
Updated as of 04/12/2012 12:33 PM

PARIS, France - Species of fungi, driven by trade, travel and climate change, pose a mounting threat to food supplies and biodiversity, scientists said on Wednesday. Widely unknown to the general public, seven fungal epidemics are under way, striking bees, bats, frogs, soft corals and sea turtles as well as rice and wheat, they said. Human health and livelihoods are at stake, for fungus costs $60 billion a year in losses

to corn, wheat and rice alone, according to their assessment, published by the science journal Nature.

"In both animals and plants, an unprecedented number of fungal and fungal-like species have recently caused some of the most severe die-offs and extinctions ever witnessed in wild species, and are jeopardizing food security," it warned.

The paper said a lethal skin fungus called Batrachochytrium dendrobatidis, discovered in 1997, has infected 500 species of frogs and toads in 54 countries, on all continents where amphibians are found.

Some areas of Central America have lost more than 40% of their amphibian species. Bats in North America and Canada are being decimated by "white nose syndrome," a pathogen called Geomyces destructans, which causes a white fungal patch to grow on their muzzles. The fungus is believed to have a natural home in cave soil.

Species of the Microsporidia family of fungus are being blamed in part for for so-called colony collapse disorder among honeybees.

In tropical climates, the fungus Fusarium solani is causing eggs laid by the loggerhead turtle to fail to hatch, while a soft coral, the sea fan, is in decline, its immune system depressed by a soil fungus.

A pathogen called Magnaporthe oryzae, causing a disease called rice blast, has led to losses of 10% to 35% in the rice harvest in 85 countries.

Another fast-emerging concern for farmers is wheat rust, caused by Puccinia graminis. A strain called Ug99 can cause 100% crop loss, helped by farmers' over-dependence on a single wheat type.

Fungal destruction of these crops, and also of corn, potatoes and soybeans, currently amounts to 125 million tons a year, according to the study. Tackling this problem would be enough to feed one in 12 of the world's population.

Fungus is spread by tough, virulent and long-living spores that can be borne by wind or water.

But human intervention, through trade, transport and global warming, is accelerating its spread, the study said.

For instance, the amphibian fungus B. dendrobatidis has gained a foothold in some ecoystems by the introduction of the North American bullfrog, which is resistant to the disease.

In the mid-19th century, a fungus called Phytophthora infestans triggered a catastrophic disease in potatoes known as late blight, causing millions of deaths from famine and an

exodus to America.

The fungus originated in the Andes but hitched a ride in tubers to Mexico, and from there to the United States and finally to Ireland, according one theory.

"Crop losses due to fungal attack challenge food security and threaten biodiversity, yet we are woefully inadequate at controlling their emergence and proliferation," said Sarah Gurr, a professor of molecular plant pathology at Oxford University.

Addressing fungal epidemics starts at the bottom, with better understanding of how the pathogen interacts with hosts and the environment. In terms of action, "effective prevention and timely control" are best, as these stop an early outbreak in its tracks, according to the study.

# # #

Group pushes U.N. to define zero waste

By Vince Bond Jr. | WRN reporter
http://www.wasterecyclingnews.com/email.html?id=1335195633

April 23 - The next step in the global green saga may be the ratification of a universally recognized definition of zero waste.

Environmental advocates from Zero Waste International Alliance (ZWIA) have collaborated on a zero-waste resolution proposal, and the groups desire is clear, no matter the locale: Let’s take it to the world stage.

Richard Anthony, chair of ZWIA, said the alliance hopes to get the resolution accepted by the United Nations during the Rio+20 UN Conference on Sustainable Development, which begins June 20 in Rio de Janeiro.

Public and private sector representatives from around the world will converge on the city as the U.N. marks the 20th anniversary of the 1992 Earth Summit, which also took place in Rio.

The resolution was reviewed by numerous ZWIA member groups, including Zero Waste UK, Zero Waste Europe, Zero Waste Italy and Zero Waste Australia. The document received unanimous approval, Anthony said.

"I have to believe that any policy-maker, at this point, that is working on international environmental policy would have to see zero waste as a no-brainer," he said. "Its better to put everything back in circulation. A key part of the definition is zero waste means no burn, no bury. The key for us is to get this to go viral."

The alliance is listed as an observer of the conference and is waiting to hear if the U.N. will take action.

Even if the document doesn’t make it to the floor, Anthony said the alliance will push for resource managers and local and national governments to embrace it, to prove there is "worldwide consensus on this definition."

The 566-word resolution declares, among other things, that voluntary recycling goals haven’t cut waste enough.

Other key points include:

* The placement of materials in waste disposal facilities such as landfills and WTE plants causes damage to human health, wastes natural resources and/or transfers liabilities to future generations.

* Landfills are the largest manmade source of methane in the United States and contribute significantly to global warming.

* Reduced waste and increased reuse, recycling and composting could help reverse climate change.

Some communities assume the financial cost of collecting, recycling and disposing of increasingly complex and toxic products and packaging, which is an unfunded mandate.

Australia is already on the brink of a zero-waste wave, said Kellie Walters, chief executive of Zero Waste Australia, in an email interview.

As waste management costs soar and landfill space becomes more limited, pursuing zero waste is imperative, Walters said. Wasting things that have alternative uses is "illogical in any culture," she added.

"I believe Australian corporations and businesses are clearly recognizing that waste disposal represents an operational cost that could be offset through a combination of better practices and creative thinking. The interest in zero waste nationally is increasing rapidly," Walters said. "The advent of [the] carbon tax has assisted in this regard, but I think a general mindset shift, particularly in larger companies, is also happening."

Michael Alexander, president of Recycle Away, said the zero waste term has been hijacked by some and "used to promote dubious technologies" in the waste-to-energy field. Recycle Away is a Brattleboro, Vt.-based recycling container company that also provides consultation for clients organizing recycling programs.

Alexander said WTE facilities and landfills don’t maximize the energy embodied in waste.

"There’s a lot of people trying to use zero waste to tout their environmental commitment and, in those cases, they’re misusing the term," he said. "For instance, the zero-waste-to-landfill claim many times is, in essence, another way of saying, We burn the materials, [or], We don’t recycle, or We’re not able to recover.

"Other users of the term zero waste believe recovering energy from the waste stream is part of the zero waste equation. A purist definition of zero waste wouldn’t accept that because by burning the material, you’re not capitalizing on the embodied energy in that material stream and that resource stream. You’re just getting some crude level of energy out of it. You’re not using the innate qualities of the material."

People have consumed a lot of resources in the past 50 years, Anthony said, and the resolution would serve to correct a wasteful course in human history. But it won’t turn things around overnight.

"Set your goals," he said. "It’s a journey."