

## February 2009 International Biochar Initiative News



### February 2009: Update on Progress for Biochar in the UNFCCC Process

Further progress has been made in raising the profile of biochar as a climate change mitigation and adaptation technology within the United Nations Framework Convention on Climate Change (UNFCCC), with the submission of additional papers in support of biochar by parties and observers to the UNFCCC process. This adds to the success in raising the profile of biochar at the UNFCCC Conference in Poland in December, 2008 (COP-14), aimed at ensuring biochar will be considered an accepted climate change mitigation and adaptation technology for the post-2012 treaty to be negotiated in Copenhagen in December, 2009.

February 6 marked a second deadline for submissions by parties to the UNFCCC in support of agenda items for COP-15 in Copenhagen. At the December 2009 meeting in Copenhagen, parties will negotiate a new international response to the climate change threat-basically a follow on to the Kyoto Protocol. Several submissions were made specific to the inclusion of biochar as a significant mitigation and adaptation tool, and several more were made on behalf of the inclusion of soil carbon sequestration and additional agricultural mitigation options.

In what IBI hails as great progress for biochar within the UNFCCC process, the parties of Belize and a Consortium of African governments (made by Swaziland on behalf of Gambia, Ghana, Lesotho, Mozambique, Niger, Senegal, Swaziland, Tanzania, Uganda, Zambia, and Zimbabwe) made submissions specifically about biochar, as did the United Nations Convention to Combat Desertification (UNCCD). For more on these developments, please see: <http://www.biochar-international.org/biocharpolicy.html>.



### Practitioner's Profile

#### Project 540: Biochar Kiln Designs for Small Farms

A group of volunteers at the Rainforest Information Centre in Lismore, NSW, Australia have formed a village-scale biochar work group that has won a grant to produce small farm and village-scale non-polluting biochar kilns. APE-UK, Artists for Planet Earth, [www.apeuk.org/funding.html](http://www.apeuk.org/funding.html) selected the biochar kiln project from many hundreds of applications for a grant of £5,000. APE-UK grants are funded from sales of world music tracks donated by musicians.

The volunteers, calling themselves the "Project 540 Biochar Kiln Group," are focusing on the low tech, low cost end of the biochar production spectrum. Geoff Moxham, Production Team Coordinator said: "I'm guessing that small local units are going to be needed, will be built everywhere, anyway, and we might as well get the

emissions (especially CH<sub>4</sub>) under control as soon as possible, or we'll just make things worse."

The group has decided on the generic name of Phoenix for the series of small kiln designs they are working on. Moxham said, "What else rises from the ashes? Why charcoal, for one, and perhaps convivial human planetary life for another." To read more on Project 540 including technical descriptions of the kilns, go to:

[www.biochar-international.org/projectsandprograms/memberprojects.html](http://www.biochar-international.org/projectsandprograms/memberprojects.html)

*Above photo: The Project 540 Biochar Kiln Group fired up a test kiln at the Lismore Sustainability Expo in October 2008. The small dry stacked brick charcoal kiln was loaded with pyrolizer tins filled with dry wood, with firewood set around them. A draft was provided by 2 meters of 4" stainless steel flue, and side stoking at 3 ports was used until the pyrolysis was complete. Photos Courtesy of Geoff Moxham.*

## Updates on Regional Biochar Groups

With this newsletter, IBI is inaugurating a regular report on the activities of the many national and regional biochar groups that are forming. If your group is not listed here, please send updates to [info@biochar-international.org](mailto:info@biochar-international.org) so you can be included in future reports. These updates will also be posted on the IBI website.

For more information on all the regional groups including contact information and websites (as applicable), please see:

<http://www.biochar-international.org/regionalbiochargroups.html>

### **Biochar-Ontario (Canada)**

Biochar-Ontario is a volunteer organization of citizens of Ontario, Canada. Biochar Ontario aspires to be the lead promoter and facilitator for all aspects of research, application, and dissemination of information relating to biochar in Ontario. It is a separate entity with a different board of directors, although it is closely affiliated with the Canadian Biochar Initiative (CBI). The mission of Biochar Ontario is to promote biochar as a vehicle to reduce greenhouse gas emissions, improve soil fertility, and enhance food security by advocating research, development and commercialization of biochar.

### **Japan Biochar Association**

The Japan Biochar Association announced its establishment on 19 January 2009 at a promoters' meeting. It was named an "Association" not an "Initiative" because Biochar's production as well as utilization has been practiced broadly by farmers, foresters, gardeners and builders (charcoal is utilized for humidity control in basements) for more than 20 years in Japan. The targets of JBA are:

1. Defining standards for the production and utilization of Biochar.
2. Research on life cycle (LC) CO<sub>2</sub> to evaluate the net carbon sink capacity of Biochar.
3. Advocating Biochar's potential related to combatting global warming.
4. Networking Asian countries to promote international progress on Biochar.
5. Establishing the institution for certification of carbon sinks by Biochar in Japan.

### **Rocky Mountain Biochar Initiative (United States)**

RMBI is organizing the North American Biochar Conference 2009, to be held in Boulder Colorado August 9th - 12, 2009. Part of the RMBI, the Center for Energy and Environmental Security (CEES) is beginning Biochar greenhouse pot trials to assess fertilizer and biochar interactions. RMBI is proud to announce a recent success from one of our members, Biochar Engineering Corporation (BEC). BEC is an active member of RMBI, providing collaboration and assistance: BEC has sold its first research unit to a joint BLM/USGS research project that is studying the affects of biochar application in mine tailings reclamation.

### **Pacific Northwest Biochar Initiative (United States)**

The Pacific Northwest Biochar Initiative was launched in February 2009. A group comprised of academics, researchers, engineers, foresters, farmers, policy experts and business leaders has formed to thoroughly examine biochar and its possibilities for the Pacific Northwest. The Pacific Northwest is a fertile ground for promoting biochar as an essential tool in the mitigation of global warming and advancing the development of biochar as a soil enhancer. Not only does the PNW have the available biomass to support biochar production, this region has a unique culture of people with

the talent and enthusiasm for sustainability, capable of advancing the production, research and utilization of biochar.

### **Northeast Carbon-Negative Network (United States)**

The US Northeast Carbon-Negative Network is organizing members to share data, ideas and insights on experiments to implement a biochar and biofuel strategy for our homes, farms and communities. Its mission is to establish community centers to demonstrate, educate and advocate the technologies and lifestyles needed in the Northeast to incubate and build carbon-negative food and energy in distributed networks of community-based businesses providing responsible, sustainable production, supply and use.

### **Central Illinois Biochar Group (United States)**

A biochar group is being organized in central Illinois with Dr. Paul S. Anderson, known for his work with Top-Lit UpDraft (TLUD) pyrolytic gasifier cookstoves as the provisional coordinator. Another member is Paul Wever, President of Chip Energy, in Goodfield, Illinois. These two initial members are primarily "char makers" and they will be supportive of members with serious "char using" interests.

## **IBI and Biochar in the News**

Below is a quick roundup of biochar in the news in February 2009 highlighted by a large number of articles from the Australian press on bringing farming and forestry into carbon emissions trading and the role of biochar.

### **General**

<http://www.ehponline.org/docs/2009/117-2/innovations-abs.html>

February 2009, Environmental Health Perspectives Volume 117, Number 2, Biochar: Carbon Mitigation from the Ground Up, by David J. Tenenbaum. An in-depth examination of important aspects of biochar science. The author interviewed many of the key biochar researchers and also talked to students at Michigan Technological University involved in a biochar program.

<http://www.rtvnoord.nl/nieuws/indexwm.asp?actie=totaalbericht&reacties=ja&pid=79166>

2-6-09, RTV Noord (Swedish), Eeuwenoude Bemestingstechniek Oplossing CO2-Probleem? (Ancient CO2 Fertilization Technology Solution Problem?) Short general interest article.

<http://www.presse-fr.com/200914014/le-carnaval-de-guyane-45-jours-de-fete-a-cayenne>

2-10-09, Presse-Fr (French), Le Carnaval de Guyane : 45 jours de fête à Cayenne (The Carnival of Guyana: 45 days holiday in Cayenne). Terra Preta features as a tourist attraction in this travel article on Guyana.

<http://www.dn.se/nyheter/vetenskap/den-svarta-jorden-kan-radda-klimatet-1.798891>

2-15-09, DN.se (Swedish), Den Svarta Jorden Kan Rädde Klimatet (The Black Earth Can Save the Climate), by Annika Nilsson. Article includes discussion of Swedish biochar research, projects in Africa and quotations from Johannes Lehman.

<http://www.energiaspiegata.it/2009/02/superare-kyoto-si-puo-serve-una-buona-agricoltura>

2-16-09, Energia Siegata (Italian), Superare Kyoto Si Può: Serve una Buona Agricoltura. (Kyoto Can Be Overcome: We Need a Good Farming). General interest article presented through an interview with Franco Miglietta.

<http://www.ecoblog.it/post/7838/il-biochar-una-speranza-per-i-suoli-e-l-atmosfera>

2-21-09, EcoBlogit (Italian), Il Biochar, una Speranza per i Suoli e l'Atmosfera (Biochar, a Hope for the Soil and Atmosphere). General interest article on biochar.

<http://redgreenandblue.org/2009/02/22/bio-char-a-carbon-negative-way-to-improve-our-food-supply>

2-22-09, Red Green and Blue, Bio-char: a Carbon Negative Way to Improve Our Food Supply, by Kay Sexton. Brief summary article with discussion of different approaches to research.

<http://www.ft.com/cms/s/2/67843ec0-020b-11de-8199-000077b07658.html>

2-27-09, The Financial Times, Black is the New Green, by Fiona Harvey. This in-depth examination of the

technical and economic issues around biochar includes lyrics from "The Biochar Blues" as a sidebar! The author concludes: "These problems of economics and communication will be the real hurdles at which biochar may fall, just as they have been the reasons why we have failed to capitalise on other ways of cutting carbon, from the very simple - small alterations to wood-fired cooking stoves in Africa and India can reduce the indoor air pollution from cooking fires that kills millions, yet hardly any homes have them - to the complex challenges, such as adopting renewable energy. A massive effort will be required to overcome the inertia that has been the downfall of other great climate ideas."

## Policy and Politics

<http://www.smh.com.au/news/opinion/bright-sparks-light-the-way/2009/01/31/1232818793461.html>

2-2-09, Sidney Morning Herald, Bright Sparks Light the Way, by Greg Hunt. The author has policy recommendations for climate change that include biochar. He highlights Crucible Carbon, a small firm in Newcastle that "is leading the world in developing biochar, a technology that effectively captures carbon for between 500 and 3000 years in blackened crop waste or wood residue."

<http://www.worldchanging.com/archives/009406.html>

2-2-09, World Changing, Geoengineering Megaprojects are Bad Planetary Management, by Alex Steffen. Includes an endorsement of biochar for carbon sequestration.

<http://gristmill.grist.org/story/2009/2/8/22587/75724>

2-9-09, Grist, Plan B: Geoengineering is risky but likely inevitable, so we better start thinking it through, by Jamis Cascio. Another discussion of geoengineering with a mention of biochar.

<http://scitizen.com/stories/Future-Energies/2009/02/Thinking-Positive---Carbon-Capture/>

2-9-09, Scitizen, Thinking Positive - Carbon Capture, by Prof Chris Rhodes. Examination of carbon capture, with some number crunching on biochar: "For example, while I like the idea of biochar, the stated goal by the International Biochar Initiative (IBI) is that we could have 1 Gt/year of carbon being drawn from the atmosphere by 2050. O.K. let's assume that's 40 years time and that there is currently (in Gt terms) about zero biochar being produced currently...Hence if a community of 2000 people could catch and sequester 200 tonnes of biochar per year (100 kg/person), 7 billion of us in total could sequester almost 0.8 Gt/year (close to the IBI projection of 1 Gt/year by 2050)."

<http://sev.prnewswire.com/environmental-services/20090223/DC7341923022009-1.html>

2-23-09, PR Newswire, UN and the World Bank Warning: Urgent Action Needed to Avoid Climate Tipping Point. UNEP and the World Bank have released reports recommending "strategies that can produce fast climate mitigation, including using the Montreal Protocol ozone treaty to quickly phase-down HFCs that have high global warming potential, and expanding the production of biochar, which is a carbon negative strategy that can significantly reduce current CO2 concentrations on decadal timescales."

<http://www.reliefweb.int/rw/rwb.nsf/db900SID/MYAI-7PM3SS?OpenDocument>

2-25-09, Relief Web, Land, Drought Are Focus of Discussions as Intergovernmental Meeting Holds Two Panels in Preparation for Commission on Sustainable Development, Source: United Nations Economic and Social Council (ECOSOC). A very long report on a very important meeting.

In February there were again a large number of stories on Australia's emissions trading policy where biochar has become part of a controversy over the role of agriculture and forestry in climate change:

<http://sl.farmonline.com.au/news/state/agribusiness-and-general/general/why-biochar/1419941.aspx>

<http://www.crikey.com.au/Politics/20090205-Flip-flop-Flannery-is-a-climate-change-opportunist.html>

<http://www.theaustralian.news.com.au/story/0,25197,25041834-7583,00.html>

<http://www.theaustralian.news.com.au/story/0,25197,25050451-7583,00.html>

<http://theland.farmonline.com.au/news/nationalrural/agribusiness-and-general/general/new-carbon-solutions-needed-to-avoid-ets-costs/1442604.aspx>

<http://www.watoday.com.au/national/emission-trading-gets-nod-over-tax-20090224-8gwb.html>

<http://www.abc.net.au/news/stories/2009/02/24/2500432.htm?section=justin>

<http://www.smh.com.au/environment/global-warming/coalition-pins-its-great-green-hope-on-carbon-trio-20090223-8ftd.html>

<http://www.crikey.com.au/Politics/20090225-The-great-Coalition-climate-change-kerfuffle.html>

<http://www.theaustralian.news.com.au/story/0,25197,25107838-11949,00.html>

## Research News

[http://insciences.org/article.php?article\\_id=2021](http://insciences.org/article.php?article_id=2021)

2-5-09, In Sciences, Planting Seeds of Success. University of New South Wales has a three-year ARC Linkage Grant with Biomass Energy Services Technology Pty Ltd to advance scientific understanding of biochar. Also, visiting Professor Stephen Joseph has attracted venture capital funding for UNSW biochar research and he is currently in the US seeking more investment support.

<http://theland.farmonline.com.au/news/state/agribusiness-and-general/general/dpi-steps-up-carbon-sequestration/1435991.aspx>

2-17-09, Farm Online, DPI Steps Up Carbon Sequestration. NSW Department of Primary Industries (DPI) has launched two web pages which highlight work being done to assess and explore the potential for holding carbon in the soil long term, and the benefit this would have in reducing greenhouse gas emissions.

## Farm, Garden and Trade

[http://www.agweb.com/get\\_article.aspx?pageid=148763](http://www.agweb.com/get_article.aspx?pageid=148763)

1-30-09, Farm Journal, Bio-Oil Heats Up, by Jeanne Bernick. Report says that "ConocoPhillips recently entered into a research partnership with Iowa State University and the National Renewable Energy Lab to evaluate the economics of various approaches to advanced biofuels, including bio-oil." Includes interview with Foster Agblevor, Virginia Tech associate professor of biological systems engineering about converting poultry litter to char and bio-oil.

<http://www.motheearthnews.com/Organic-Gardening/Make-Biochar-To-Improve-Your-Soil.aspx>

February/March 2009, Mother Earth News, Make Biochar -- this Ancient Technique Will Improve Your Soil, by Barbara Pleasant. Article with practical information for the home gardener on how to make and use biochar, like the following: "If you live close to a campground, you may have access to an unlimited supply of garden-worthy biochar from the remains of partially burned campfires."

[http://www.earthtimes.org/articles/show/mantria-industries-llc-and-carbon-diversion-inc-introduce-eternagreen-biochar\\_702031.shtml](http://www.earthtimes.org/articles/show/mantria-industries-llc-and-carbon-diversion-inc-introduce-eternagreen-biochar_702031.shtml)

2-3-09, EarthTimes, Mantria Industries, LLC and Carbon Diversion Inc. Introduce EternaGreen Biochar. Announcement that Mantria Industries, LLC, based in Philadelphia, is offering biochar for sale and is employing BioChar Brokers, LLC "to work with customers globally in regards to testing, analysis and ultimately supplying them with BioChar products that will fit their personalized needs."

<http://www.nrtoday.com/article/20090205/NEWS/902059846/1063/NEWS&ParentProfile=1055&title=Biomass%20harvesting%20could%20create%20jobs,%20prevent%20fire>

2-5-09, News Review, Biomass Harvesting Could Create Jobs, Prevent Fire, by Adam Pearson. In Douglas County, Oregon, the Forest Service has a biochar pilot project that will demonstrate a portable biomass pyrolyser by Renewable Oil International.

<http://www.guardian.co.uk/lifeandstyle/allotment/2009/feb/06/gardeningadvice-gardens>

2-6-09, The Guardian, Calling All Ethical Gardeners, by Lucy Siegle. Announcement of a contest for an Ethical Garden Award. Biochar is mentioned as an ethical gardening practice along with permaculture, wildlife gardens and community wildflower meadows. Entries must be received by March 9th.

<http://www.echonews.com/index.php?page=News%20Article&article=25159&issue=387>

2-12-09, Northern Rivers Echo, UK Musos Fund Local Biochar Trial. Report that Rainforest Information Centre (RIC) has received a grant from the UK based Artists for Project Earth to research and develop a farm-based biochar kiln. "RIC founder John Seed said there was a lot of interest in biochar technology all over the world, but most of the research was for projects in the \$1 million to \$40 million bracket...We wanted one that would work on a (conventional) farm."

<http://www.carbonnews.co.nz/story.asp?storyID=2837>

2-16-09, Carbon News, Biochar pioneer recruits top Australian scientist. Report on New Zealand biochar company Carbonscape and the news that it has recruited scientist Tim Flannery to its board of directors.

[http://www.emediaworld.com/press\\_release/release\\_detail.php?id=369819](http://www.emediaworld.com/press_release/release_detail.php?id=369819)

2-19-09, eMedia World, Sustainable Power Corp. Acquires Angel Eyes Produce Corp. "Sustainable Power Corp. produces Vertroleum® biocrude, biogas and a biochar which is essentially a 7-3-7 organic fertilizer. By acquiring Angel Eyes, the Company extends its chain of green products from garbage and other waste organic materials to biofuels, from biofuels to electricity, and now from garbage to biofuels to electricity to food."

<http://www.motherearthnews.com/Hands-On-How-To/Biochar-Stoves.aspx>

2-20-09, Mother Earth News, New Biochar Stoves at the 2009 ETHOS Conference. Mother Earth News has reprinted the report from the January IBI newsletter.

<http://www.stuff.co.nz/stuff/marlboroughexpress/4859672a6523.html>

2-25-09, Marlborough Express, Carbon Firm Sends Test Samples, by Kaikoura Star. "Marlborough charcoal technology company Carbonscape has two reasons to celebrate: it has sent the first batch of charcoal created with its microwave technology off for testing, and has welcomed a big name from across the Tasman to its board."

## Multimedia

<http://science.discovery.com/tv/ecopolis/episode/episode.html>

February 2009, Discovery Channel. Biochar is featured on the Discovery Channel Ecopolis program: A World of Trash. The full episode is not yet posted, but the following link contains a segment of the episode:

<http://videos.howstuffworks.com/science-channel/34242-ecopolis-super-soil-video.htm> UC Berkeley Prof. Daniel Kammen narrates the program and expresses his support for biochar.

## Coming Up in the March 2009 Newsletter

News, Articles, and More

The Third Practitioner's Profile

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