

March 2009 International Biochar Initiative News



IBI Welcomes New Executive Director Stephen Brick

The Board of Directors of the International Biochar Initiative is pleased to announce that Stephen Brick has been appointed to serve as Executive Director.

Brick most recently served as the manager of the Environmental Program at the Joyce Foundation in Chicago, a post he held since 2005. In this capacity he managed a \$9 million yearly grant portfolio, focusing on energy, global warming, and Great Lakes protection and restoration.

Brick has spent nearly thirty years working in the energy and environmental fields. Previous experience includes Associate Director for Research at the Energy Center of Wisconsin, Director of Environmental Policy and Public Affairs for the PG&E National Energy Group, Technical Director for the Clean Air Task Force, and Vice President of MSB Energy Associates.

"The spotlight is now focused on energy and climate, and biochar can play a role in solving these linked problems. Steve Brick brings to this job the right mix of skills to lead IBI as it seeks to make biochar a mainstream solution through basic science, policy development, and market transformation" said Johannes Lehmann, IBI Board Chairman and Associate Professor of Soil Science at Cornell University.

Brick assumed the IBI leadership on March 1, 2009, and will be based in Madison, Wisconsin.

IBI to Attend UNFCCC Negotiations in Bonn

The first set of three planned negotiating sessions before COP-15 in Copenhagen in December 2009 is being held Sunday 29 March to Wednesday 8 April 2009 in Bonn. IBI Executive Director Steve Brick and IBI Policy Director Debbie Reed will both be in attendance to further promote the consideration of biochar as a potential mitigation and adaptation technology in the post-2012 UNFCCC framework.

There will be several workshops on the issue of land use, land use change, and forestry during this set of negotiations, to allow Parties to focus in on detailed issues relating to terrestrial sequestration and the mitigation potential of soils and forests. In the period since the COP-14 negotiations in Poznan, Poland, several parties and intergovernmental observers have made strong submissions for the consideration of biochar and agricultural soil carbon as mitigation and adaptation technologies for the post-2012 period.

IBI will continue to work with Party representatives, the UNCCD, and other interested parties on outreach and education regarding biochar and soil carbon sequestration opportunities in developing and industrialized countries, to secure a beneficial role for these activities in future UNFCCC frameworks.

Practitioner's Profile

Pro-Natura: Green Charcoal for Sustainable Development

Founded in Brazil in 1986, Pro-Natura was one of the first Non-Governmental Organisations from the South to become truly international; after the 1992 Rio Summit, Pro-Natura International located its headquarters in Paris with the focus on fighting poverty together with biodiversity conservation and climate change mitigation. One of the main developments under this programme was "green charcoal", a biomass charcoal produced through clean pyrolysis from renewable "waste" biomass (biomass not used to feed animals or enrich the soil such as rice husks, invasive weeds).



The primary reason why Pro-Natura International started working on green charcoal was deforestation. With increased deforestation, wood was becoming harder and harder to find in Africa, Latin America, and Asia and there was a lack of alternative energies. In addition to deforestation, use of wood as a domestic fuel also presents other major disadvantages such as the time and potential security burden on women and children to travel to collect firewood, and the harmful emissions released from indoor air pollution by burning of wood. The green charcoal briquettes as a domestic energy solution alternative to firewood or wood charcoal can be part of an energy answer for rural households in developing countries.

For more on this story, please see:

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

Mixing Biochar and Soil in Senegal, Photo courtesy of Pro-Natura

Chapter 1 of Biochar for Environmental Management now Available Online

The Introduction, Foreward, and Chapter 1 in PDF Format of Biochar for Environmental Management is now available online at the IBI website, thanks to Earthscan Press. In March 2010, the entire book will be available on the IBI site to read online. For more information, please see: <http://www.biochar-international.org/projectsandprograms/biocharbook2009.html>



New Resources Announced

IBI is pleased to announce the following new resources for biochar researchers, gardeners, farmers, and photographers.

IBI Biochar Trials Document Now Available

Many people all over the world are now experimenting with biochar in their home gardens. Farmers, nursery operators and schools are all looking for more information about how to use biochar. The interest is high, but until now, there has not been much information available outside of the academic world. The good news is that for all the budding experimentalists out there, IBI Extension Director Julie Major has compiled A Guide to Conducting Biochar Trials. This guide is now available to download as a pdf file from the IBI website at:

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

A Guide to Conducting Biochar Trials will help you design your scientifically valid biochar experiment at any scale ranging from a few pots in a greenhouse to a large farm. The Guide contains data sheets for you to record the details of your design setup and your results. If you would like to register your project with the IBI, send an email with your contact information to [Julie Major](mailto:Julie.Major@biochar-international.org).

Biochar Bibliography: Search IBI's RefShare Database for Peer-Reviewed Articles Relevant to Biochar, Black Carbon, and Terra Preta.

This database offers up-to-date references with abstracts, whenever available. It is maintained and updated by IBI, and contains articles relating to a wide range of biochar-related topics organized in folders. Available at: <http://www.biochar-international.org/aboutbiochar/biochararticlesandnews.html>

Announcing the Biochar Gardens photo group on Flickr

Biochar Gardens is a place for farmers and gardeners to post pictures of their gardens, farms, containers and greenhouses that use soil amendments based on biochar. Please share pictures of your garden at all stages of growth, from preparing your soil to harvesting. Members would also love to see your pictures of composting and your methods for making charcoal and preparing your biochar soil amendments. You can indicate how you would like to share your photos and if you like, leave contact information so that potential users can get your permission to use your photos in their publications.

To visit Biochar Gardens go to <http://www.flickr.com/groups/biochargardens> (external site)

Updates on Regional Biochar Groups

If your group is not listed on the website, please send your information to info@biochar-international.org so you can be included in future reports. The groups listed below are both new groups and those who have sent updates (all information is also be posted on the IBI website at:

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

Seattle Biochar Working Group (SeaChar) (United States)

SeaChar announces a test plot ground breaking work party and biochar stove demonstration on Saturday April 4th from 10:00 am until 5:00 pm. SeaChar formed in Sept. of 2008 with this mission: to help heal the world, and we wisely amended that by saying we would start here in Seattle, Washington, USA. One shovelful at a time, if need be. With some luck and some hard work we begin with a 5-year, well designed, multi-partner, biochar plot test, this spring. That this project now has a secure home on South Seattle Community College's campus means we have a very public platform from which we can educate the people in our region about biochar technology.

New Zealand Biochar Network

New Zealand has recently formed a Biochar Network in conjunction with Massey University's Biochar Initiative. The Biochar Initiative is a wide ranging, multi-year, internationally linked research and development (R&D) program, which aims to advance the understanding of biochar as a mitigation solution to global climate change and to enable its uptake in New Zealand particularly by the agricultural and forestry sectors. As part of this Initiative, Massey University has established the New Zealand Biochar Research Centre (NZBRC) to accommodate the two Ministry of Agriculture and Forestry (MAF) Professorial chairs in Biochar and Bioenergy Pyrolysis Engineering, and in Biochar and Soil Science Research.

ICHAR Italian Biochar Association

On 26 March 2009 the Italian Association on Biochar (ICHAR) was founded. ICHAR is a registered non-profit association supporting Italian researchers, commercial entities, development agents, farmers, and others committed to supporting sustainable biochar utilization systems that remove carbon from the atmosphere and enhance the earth's soils. The Association was founded by representatives from National Research Council CNR-Ibimet Institute of Biometeorology of Florence and University of Udine (Department of Agriculture and Environmental Sciences), commercial ventures with a general interest in promoting the research, development, demonstration, use and commercialisation of the potential technology of biochar production in Italy.

UK Biochar Research Centre (UKBRC)

In Scotland, a new centre dedicated to the research of biochar will be launched April 1, 2009. The UK Biochar Research Centre (UKBRC) has been initiated by Prof. Stuart Haszeldine at the University of Edinburgh, with "Science and Innovation" funding from the Engineering and Physical Sciences Research Council (EPSRC). The objective of UKBRC is to generate scientific evidence that improves understanding of biochar function, addresses key uncertainties, informs policy and regulation, and underpin commercial and community initiatives around biochar. Around these core activities and with two initial partners - Rothamsted Research and Newcastle University - UKBRC seeks to build an expanding research programme, engage other research groups nationally and internationally, and develop links with similar programmes in other countries.

The launch event comprises an open workshop primarily for the UK research community in which drivers for, and risks and barriers to the adoption of, pyrolysis-biochar will be debated and research priorities discussed. For more information, see <http://www.biochar.org.uk> or contact ukbrc@ed.ac.uk

Pacific Northwest Biochar Initiative (United States)

The PNW Biochar Group is pleased to announce 2 upcoming meetings:

1) Topics in Biochar April 3rd 10AM-3PM, Corvallis, Oregon at the USDA-ARS. Please see link to <http://groups.google.com/group/pnw-biochar/web/pnw-biochar-meeting-friday-april-3rd?hl=en>

The event is drawing authorities from the technical and environmental and policy spheres and we are pleased to welcome many of the foremost authorities and upcoming talents. Call-in capability is also available on a first come basis.

2) Regional Gathering May 21st & 22nd, Richland, WA, Pacific Northwest National Laboratory. Please see link to preliminary agenda:

http://groups.google.com/group/pnw-biochar/browse_thread/thread/bc098e9d2063a155?hl=en

IBI and Biochar in the News

Biochar news in March had a great deal of variety. Don't miss the news about student projects that are winning prizes and awards. And make sure you watch the videos highlighted below. The BBC short interviews are very informative and the Italian videos are interesting even if you don't know the language.

Multimedia

<http://news.bbc.co.uk/2/hi/science/nature/7941863.stm>

16 March 2009, BBC News, Engineer on turning sewage into charcoal. Video interview with German engineer Helmut Gerber as he demonstrates his pyrolysis machine.

<http://news.bbc.co.uk/2/hi/science/nature/7941852.stm>

16 March 2009, BBC News, How to make your plants grow faster. Video interview with Dr Bruno Glaser

from Bayreuth University in Germany as he shows results of his experiments with biochar.

<http://nova.ilsole24ore.com/nova24ora/2009/03/il-biosegreto-di-eldorado.html>

12 March 2009, Nòva, Il bio-segreto di Eldorado. The bio-secret of Eldorado. Two video interviews here: one with inventor Nat Mulcahy demonstrating his pyrolyzing biomass stove, and one with Franco Miglietta, a researcher at the Institute of Biometeorology, CNR, in Florence, Italy, showing his biochar field trials.

General

<http://www.orionmagazine.org/index.php/articles/article/4418/>

March/April, Orion Magazine, Plants Suck, by Bill McKibben. McKibben says: "After twenty years of studying climate change, if I'm sure of anything, it's that there's no one fix that will save the world." And also, "If you could continually turn a lot of organic material into biochar, you could, over time, reverse the history of the last two hundred years. During those two centuries we've taken millions of years of compressed organic material-weeds and sticks and dinosaurs and plankton-and drilled and mined them up to the surface so we could burn them. All that ancient biomass is now up in the atmosphere, causing problems. Big problems, like melting the ice caps. The biggest problems ever."

<http://www.cnn.com/2009/TECH/science/03/30/biochar.warming.energy/index.html>

30 March 2009, CNN, Can 'biochar' save the planet?, by Azadeh Ansari. Focus of this article is on researchers in Athens, Georgia. Includes interviews with research engineer Brian Bibens, biochar researcher Christoph Steiner, and Eprida CEO, Danny Day.

<http://www.greenleft.org.au/2009/789/40643>

28 March 2009, Green Left Weekly, Can biochar help stop climate change?, by Renfrey Clarke. Review of Australian biochar research finds much promise and calls for more investment: "Private capital, meanwhile, remains unwilling to take the risks involved in developing a large-scale biochar industry. The need is obvious for governments to step in."

<http://www.guardian.co.uk/environment/2009/mar/28/letters-biochars-geoengineering>

28 March 2009, The Guardian, Letters: Credit and criticism for biochar. Several letters in response to George Monbiot including one from IBI Executive Director, Stephen Brick.: "We don't have all the answers on biochar production and utilisation; indeed the mission of the International Biochar Initiative (IBI) is to seek these answers, objectively and quickly."

<http://www.guardian.co.uk/environment/georgemonbiot/2009/mar/27/biochar-monbiot-global-warming>

27 March 2009, The Guardian, Charleaders must cool enthusiasm for setting fire to the planet, by George Monbiot. Monbiot responds to rebuttals of his March 24 column.

<http://www.guardian.co.uk/commentisfree/2009/mar/27/biochar>

27 March 2009, The Guardian, This gift of nature is the best way to save us from climate catastrophe, by Peter Read. Response to George Monbiot.

<http://blogs.tnr.com/tnr/blogs/environmentandenergy/archive/2009/03/26/saving-the-world-with-monster-microwaves.aspx>

26 March 2009, The New Republic, Saving the world-with monster microwaves, by Rob Inglis. A look at Carbonscape's microwave biochar technology and the controversy aired in The Guardian.

<http://www.gmagazine.com.au/news/1250/biochar-a-solution-climate-change>

26 March 2009, G-Online, Biochar - a solution to climate change?, by Katie Lee. A review of biochar research in Australia with quotes from Annette Cowie, forest scientist for New South Wales's Department of Primary Industries in Sydney, Australia. More articles on biochar and climate policy in Australia here:

<http://sl.farmonline.com.au/news/nationalrural/agribusiness-and-general/general/turnbull-adviser-cautions-against-biochar/1470411.aspx>

<http://www.canberratimes.com.au/news/opinion/editorial/general/farming-part-of-the-carbon-solution/1455743.aspx>

<http://www.abc.net.au/science/articles/2009/03/04/2507270.htm?site=science/askanexpert&topic=enviro>

<http://www.abc.net.au/news/stories/2009/03/05/2508218.htm?section=australia>

<http://www.carbonnews.co.nz/story.asp?storyID=2942>

<http://www.worldchanging.com/archives/009494.html>

http://bioenergy.checkbiotech.org/news/biochar_needs_3_5_years_more_research

http://www.biomassmagazine.com/article.jsp?article_id=2498

<http://www.guardian.co.uk/environment/2009/mar/25/hansen-biochar-monbiot-response>

25 March 2009, The Guardian, We never said biochar is a miracle cure, by Pushker Kharecha and Jim Hansen. Response from NASA climate scientists to Monbiot: "It is unfortunate that George Monbiot has insinuated that one of us (Jim Hansen) is a believer in biochar as a "miracle" solution for the climate crisis. If he is basing this on our published papers, then he has grossly misunderstood them."

<http://solveclimate.com/blog/20090325/biochar-and-george-monbiots-misguided-rant>

25 March 2009, Solve Climate, Biochar and George Monbiot's misguided rant, by Max Aji: "Monbiot is right to pillory ... vast plantations of socially and ecologically disruptive fast-growing monoculture trees. But that doesn't mean biochar isn't a good idea, even if it makes for good copy to attack it and its proponents in the harshest terms."

<http://environmentalresearchweb.org/cws/article/futures/38378>

25 March 2009, Environmental Research Web, Competing to solve climate change. "UK based newspaper the Financial Times and sustainable development charity Forum for the Future are running a competition to find the most innovative solution to the effects of climate change... The winner will receive \$75,000 donated by global electronics giant Hewlett-Packard." One of the finalists is the biochar producer Carbonscape. More information is at:

<http://www.ft.com/indepth/climatechallenge>

<http://www.stuff.co.nz/marlborough-express/news/2285398/Carbonscape-in-run-for-prize>

<http://www.greentechmedia.com/articles/cars-into-electricity-corncoobs-into-ammonia-5950.html>

25 March 2009, Greentech Media, Cars into electricity, corncoobs into ammonia. Review of some pyrolysis technologies including processes to make ammonia-based fertilizer and biochar from crop waste.

<http://www.guardian.co.uk/environment/cif-green/2009/mar/24/response-biochar-chris-goodall>

24 March 2009, The Guardian, Biochar: Much is unknown but this is no reason to rule it out, by Chris Goodall. Goodall, author of Ten Technologies to Save the Planet responds to Monbiot: "George Monbiot is right to tell biochar enthusiasts to calm down... Nevertheless in his eagerness to get us to tone down our enthusiasm he goes too far. Biochar is a useful and important way to help reduce atmospheric concentrations of CO2."

<http://www.guardian.co.uk/environment/2009/mar/24/biochar-earth-c02>

24 March 2009, The Guardian, Biochar: let the Earth remove CO2 for us, by James Lovelock. Earth scientist James Lovelock responds to Monbiot's column critical of biochar and its proponents. "George Monbiot is wrong to dismiss biochar out of hand - burying carbon is one way to tackle climate change."

<http://www.guardian.co.uk/environment/2009/mar/24/george-monbiot-climate-change-biochar>

24 March 2009, The Guardian, Woodchips with everything. It's the Atkins plan of the low-carbon world, by George Monbiot. The Guardian's environmental columnist criticizes biochar and its proponents: "The latest miracle mass fuel cure, biochar, does not stand up; yet many who should know better have been suckered into it."

<http://www.reuters.com/article/smallBusinessNews/idUSTRE52N36U20090324>

24 March 2009, Reuters, Harnessing pig power for clean energy, by Gerard Wynn. Discusses the challenges of soil carbon sequestration, including biochar.

<http://www.tribunanews.com.br/news.php?newsid=15284>

23 March 2009, ISTOÉ Magazine, And the good news of the land, article in Portuguese about Brazil's terra preta, biochar research, and the upcoming IBI conference in Sao Paulo in 2010.

<http://www.theengineer.co.uk/Articles/310567/Green+giants.htm>

23 March 2009, The Engineer, Green giants? In-depth analysis of technology developments in China and India with mention of biochar as a preferred sequestration technology along with information on India's Environmental Engineering Research Institute [NEERI] where biochar research is ongoing.

<http://www.farmanddairy.com/news/no-till-works-but-is-not-always-applicable-for-storing-carbon/11525.html>

23 March 2009, Farm and Dairy, No-till works, but is not always applicable for storing carbon. Article compares no-till methods to other soil carbon sequestration techniques including biochar.

http://insciences.org/article.php?article_id=3479

19 March 2009, InSciences, Climate change is such a serious threat to national security that military organizations are now part of the solution. Report on the Climate Change & Security at Copenhagen conference and discussion of "fast-action" mitigations that include reduction of soot emissions and increased use of biochar.

<http://www.stuff.co.nz/business/analysis/2276648/The-colour-of-carbon>

19 March 2009, Business Day, The colour of carbon, by Denise McNabb. Report on progress and setbacks for emissions trading schemes in Australia and New Zealand and news that "Citi Investment Research ... is also sceptical about the magnitude of achievable abatement from forestry and biochar..."

http://news.cnet.com/8301-17912_3-10200246-72.html

19 March 2009, CNET News, Manmade biomass coal offers storage and fuel, by Candace Lombardi. Report on Carbonscape's Black Phantom machine: "The invention combines two popular environmental efforts: using biochar for carbon capture and storage (CCS), and developing alternative fuel sources from biomass." Additional stories on the Black Phantom here:

<http://www.businessgreen.com/business-green/news/2238504/biochar-goes-industrial-giant>

http://www.lowcarboneyconomy.com/community_content/low_carbon_news/4937

<http://blogs.discovermagazine.com/80beats/2009/03/13/meet-the-black-phantom-a-huge-microwave-that-fights-climate-change/>

In Chinese:

<http://news.china.com.cn/chinanet/07news/china.cgi>

[docid=655647154322513990,9296979263124952168,](http://news.china.com.cn/docid=655647154322513990,9296979263124952168,17158934217903557376,9296979263124952168,0&server=202.108.4.70&port=5269)

[17158934217903557376,9296979263124952168,0&server=202.108.4.70&port=5269](http://news.china.com.cn/docid=655647154322513990,9296979263124952168,17158934217903557376,9296979263124952168,0&server=202.108.4.70&port=5269)

http://www.canadianbusiness.com/columnists/joe_castaldo/article.jsp?content=20090317_144042_10112

17 March 2009, Canadian Business Online, Alterna Energy extols virtues of biocarbon, by Joe Castaldo. "Inside the boardroom of Alterna Energy's office in Prince George, B.C., a row of what appear to be coal briquettes rest on a ledge. Company president and co-founder Leonard Legault picks one of them up, rests the plum-sized object in his hand and explains, 'This is a carbonized apple.'"

<http://news.bbc.co.uk/2/hi/science/nature/7924373.stm>

16 March 2009, BBC News, Biochar: Is the hype justified?, by Roger Harrabin.

"A growing worldwide movement is now bringing together the soil scientists fascinated by the benefits of biochar..." The author interviews some of the scientists, including Bruno Glaser of University of Bayreuth where new studies show that "biochar may almost double plant growth in poor soils."

<http://www.timesonline.co.uk/tol/news/uk/science/article5908376.ece>

15 March 2009, The Sunday Times, Artificial trees and brightened clouds may help to cool us down. Report on geo-engineering with mention of biochar.

http://www.shp.org/Home/Prep_Life/Academics/Electives/Action0809/BioCharExperiment/biocharexperiment.html 15 March 2009,

The Prep, BioChar Experiment. Report on biochar science project in the newsletter of Seton Hall Preparatory School: "Environmental

Science teacher Dave Snyder has partnered up his class with a cutting edge green start-up that is modernizing some environmentally positive agricultural techniques that actually go back centuries." Includes detailed description of experimental method.

<http://www.stuff.co.nz/waikato-times/news/2260418/Prizewinner-is-a-gas/>

14 March 2009, Waikato Times, Prizewinner is a gas. Jake Martin, 17, won three of the top prizes in New Zealand's Realise the Dream national awards for science students for his wood gasifier that produces biochar which Jake uses to fertilize his mum's vegetable garden.

<http://yass.yourguide.com.au/news/local/news/general/biochar-transforming-waste-into-renewable-energy/1458695.aspx>

13 March 2009, Yass Tribune, Biochar: transforming waste into renewable energy.

Report on progress of biochar commercialization in Australia.

http://www.yourlocalguardian.co.uk/news/local/wandsworthnews/4196170.Battersea_woman_wins_eco_award/

12 March, 2009, The Guardian, Battersea woman wins eco award, by Katie Wilson. "A Battersea woman and her team beat off stiff international competition last week to be crowned winners of the Cooling the Planet environmental award." Their idea was to use hydro-pyrolysis to produce energy and biochar from landfill waste. Also reported here:

<http://www.pandct.com/media/shownews.asp?ID=20511>

<http://www.ilsole24ore.com/art/SoleOnLine4/dossier/Economia%20e%20Lavoro/risparmio-energetico/frontiere/luciastove-biochar.shtml?uuid=68d0d23e-0edb-11de-b874-530b20f3f76e&DocRulesView=Libero>

12 March 2009, Il Sole 24 Ore, Lucia Stove, born in Tortona, is the solution to bring energy and biochar to villages, by Marco Magrini. The story of Nat Mulcahy and how he came to invent his co-axial gasification stove that produces biochar. In Italian.

<http://cornellsun.com/section/news/content/2009/03/12/univ-turns-waste-renewable-energy>

12 March 2009, Cornell Sun, Univ. turns waste into renewable energy. The Cornell University Renewable Bioenergy Initiative will use multiple approaches to produce energy from university biomass waste, including pyrolysis. "Having many different complementary bioenergy approaches under one roof is especially intriguing because we have in our landscapes multiple feedstocks that require differential treatment," said Prof. Johannes Lehmann, crop and soil sciences.

http://www.newsitaliapress.it/pages/dettaglio.php?id_ink=11_150335

12 March 2009, News Italia Press, Italy is also in the forefront against the greenhouse effect. The Institute of Biometeorology, CNR (IBIMET) in Florence is pioneering the use of biochar for climate mitigation and improved crop yields under the direction of Dr Franco Miglietta. Also reported on here:

<http://www.agoramagazine.it/agora/spip.php?article6202>

http://www.terranauta.it/a925/cambiamenti_climatici/la_terra_nera_degli_indios_cattura_la_co2.html

<http://www.theaustralian.news.com.au/story/0,25197,25167373-12332,00.html>

11 March 2009, The Australian, Carbon hopes push case for charcoal, by Jill Rowbotham. In-depth review of pyrolysis research in Australia, biochar and climate policy and the struggle to produce enough biochar to supply research programs.

<http://news.bbc.co.uk/1/hi/sci/tech/7921619.stm>

4 March 2009, BBC News, Big problems need big solutions, by Tim Lenton. Lenton discusses implications of his study on geo-engineering. He says: "Perhaps the most potent option, on the century timescale at least, is to grow plants to get CO₂ out of the air and then convert their biomass to both charcoal and (bio)fuels." Biochar is also attractive as a potentially income-generating option. All other options are likely to cost money.

<http://www.newscientist.com/article/mg20126973.600>

25 February 2009, New Scientist, Hacking the planet: The only climate solution left?, by Catherine Brahic. A look at geo-engineering options. Includes an interesting graphic side-by-side view of biochar and other options. Graphic is here:

<http://www.newscientist.com/data/images/archive/2697/26973601.jpg>

Industry Press Releases

<http://www.scoop.co.nz/stories/BU0903/S00474.htm>

20 March 2009, Carbonscape, NZ company makes shortlist in UK climate challenge.

<http://www.istockanalyst.com/article/viewiStockNews/articleid/3139375>

23 March 2009, Mantria Industries, Mantria Industries, LLC and Carbon Diversion Inc. release EternaGreen BioChar specs.

<http://www.emediawire.com/releases/2009BioCharBrokers/EternaGreen/prweb2273944.htm>

30 March 2009, EternaGreen, BioChar Brokers offers first online and retail sales of EternaGreen™ BioChar.

NOTE: If you would like your company's press release to appear in this space, please send it to: kelpie@dishmail.net

Coming Up in the April 2009 Newsletter

IBI News, Updates on Regional biochar groups, Articles, and More

The Fourth Practitioner's Profile: Mantria Corporation