



January 2010 News

Looking ahead: IBI in the Next Three Years

By Debbie Reed, IBI Executive Director

Coming off a very busy 2009 (see our [end of the year report](#)), we are looking ahead to our mutual activities from now to 2012. As you know, biochar is a very promising technology for improving soils and mitigating climate change. With your support, IBI has established itself as the international platform for organizing and information sharing among academic, research, policy, commercial, and other interests in biochar production and utilization systems. We have achieved a great deal, but we also have much work ahead of us.

Turning this challenge into action means that a key next step for the IBI is to work with all of you, including industry and public and private investors to insure that needed research and development for biochar production and utilization takes place. Conscientious attention to detail at this time will allow the industry to flourish at a global scale.

In its strategic planning, and based on your input and feedback, IBI has identified many high priority activities to conduct over the next three years, including the following:

- **Develop** universal quality and standard rating systems for biochar and biochar production including concepts of sustainable biochar production from agricultural waste;
- **Develop** best management practices for biochar application systems, including producing guidance and recommendations on practical aspects of biochar application to soil;
- **Prepare** a global biochar research and development matrix to first identify critical research gaps, and help populate the matrix through outreach to researchers and others to undertake the necessary work;
- **Undertake**, with experts in the global biochar community, critical economic, greenhouse gas, feedstock availability, and value chain analyses to create and inform business models and create a global roadmap for biochar systems deployment. This will help expand our knowledge of feedstock availability by regions, practical applications, economic viability, and other potential avenues

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and constraints;

- **Work more closely with** industry to enhance information flow, speed investments, and boost commercialization efforts and successes across the industry;

- **Establish** a biochar project review committee to help assess projects under development or in operation;

- **Assist** in the development of rigorous methodologies and protocols to award carbon credits; and

- **Serve** as a platform for the exchange of information and for the dissemination of information to the public. This includes supporting regional biochar conferences as well as organizing the 2010 IBI Conference in Rio de Janeiro, Brazil, September 12 - 16, 2010 and a 2011/2012 IBI conference in Japan; developing and teaching workshops and webinars; expanding the IBI website; and expanding our growing network and member base.

And of course, we will continue to provide extension services and expertise to the best of our ability, and as resources allow; the demand for these services has far exceeded our capacity and resources in the past year, but we are striving to overcome resource constraints to continue to deliver the highest quality support to the international biochar community, and we look forward to continued success in the future.

IBI's small cadre of staff and consultants, together with an active Board, Advisory Board and Advisory Committee, have already taken on a portion of nearly all the tasks above and look forward to working with you all to help realize the promise of biochar.

Opportunity to Support Biochar Stoves in Haiti

A partnership of the WorldStove, LLC, the International Lifeline Fund and a private Haitian enterprise called HSSA Energy and Biomass, the Lifeline to Haiti Project ("LHP") seeks to help Haiti help itself through the current disaster and beyond by providing fuel-efficient, carbon negative stoves that will alleviate the food and clean water needs of thousands of Haitian families who were rendered homeless by the earthquake. At the same time, LHP will lay the groundwork for a long-term, self-sustaining initiative that will combat deforestation, poverty and diseases attributable to open fire cooking.

For more information and to support this program, please go to <http://www.lifelinefund.org/haiti2.html>

IBI Membership Update

As many of you are aware, IBI has started a membership program to broaden the base of support for the organization. Our Charter Membership campaign started in mid-December 2009 and will end January 31, 2010.

We thank those of you who have joined IBI and are pleased to announce that 162 Charter Members have signed up so far. There is now one week left in the IBI

Charter Membership drive. Please help us reach our goal of 200 new members by January 31st. Sign up today and get your membership gift - the IBI hat!

[Click here to join.](#)

Practitioner Profile: Black is Green (BiG): Producing Biochar with a Mobile Pyrolysis Unit in Australia

The original focus of BiG, according to co-founder Dr James Joyce, was to do something about sugar cane trash. James saw a large resource going to waste while neighbors complained about cane trash fires. James envisioned new income streams for farmers from turning the portion of sugar cane trash that is burnt off in agricultural fields into a charcoal fuel, to displace coal usage by local industry and for the charcoal briquette market.



But James, along with his father and BiG partner Stan Joyce, soon realized that first, there was no technology out there that was suitable for this application and any that might have been adaptable were too capital intensive and immobile to justify; and second, that it was not possible to get the product cost below the necessary \$100/tonne target for coal displacement required in a country without carbon credits.

So, James dusted off his PhD studies on biomass gasification and set out to design a pyrolysis unit that met the criteria of low capital and operating cost, mobility, flexibility and ability to handle un-shredded cane trash. He said biochar was part of his design from the beginning: "We were always aware of biochar as a higher value alternative, but it soon became apparent that it would need to become our focus if we were to create a viable business from processing of biomass residues." To read the remainder of this article, go to: <http://www.biochar-international.org/projects/BiGchar>.

Photo: James in the field with a unit. Courtesy of James Joyce.

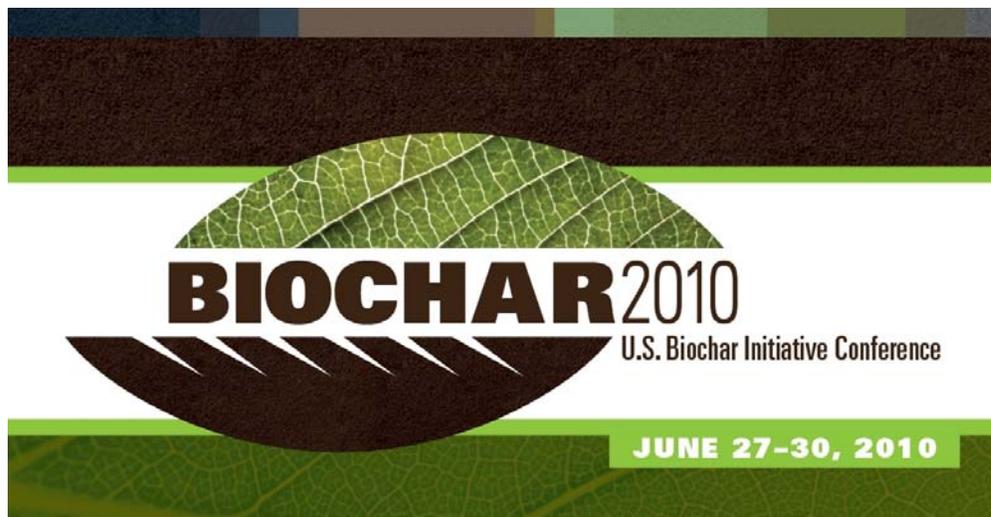
Save the Date: IBI's 3rd International Conference in Rio de Janeiro, Brazil September 2010

IBI is pleased to announce the 3rd International Conference of the IBI will be held in Rio de Janeiro, September 12 - 16, 2010. The organizing and scientific committees are busy with a working agenda, will have a website with registration up online, and will issue a call for abstracts in the coming month.

We expect the conference to be the largest international biochar conference to date and are building the agenda and the activities on the past two international conferences as well as the excellent regional and national biochar conferences of

the past few years. We look forward to hosting this conference in Brazil, together with our partners and colleagues at EMBRAPA--a leading light in studies of biochar and Terra Preta. The conference will run over the course of four days and include both oral and poster presentations, ample networking opportunities, side meetings, discussion groups, display booths, and a field trip opportunity to see the famous Terra Preta sites in the Amazon.

Submit an Abstract to Biochar 2010: USBI Conference



Recent advances in biochar science and technology will be showcased at Biochar 2010: U.S. Biochar Initiative Conference, hosted by Iowa State University on June 27-30. Join scientists, engineers, policymakers, policy analysts, producers, and users to discuss these critical developments.

Deadline for submission: February 1

For Biochar2010 conference information, visit www.biorenew.iastate.edu/biochar2010

Massey University and the New Zealand Biochar Researchers Network to Host 2 Day Biochar Workshop

The New Zealand Biochar workshop will specifically address biochar opportunities for New Zealand stakeholders and will be held Feb 11 - 12, 2010 at the Manawatu Campus of Massey University.

The following topics will be discussed:

- Biochar production and technologies
 - Biochar characterization
 - Agronomic and environmental benefits of biochar
 - Policy issues for the biochar industry
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To see a provisional agenda and download a registration form, please go to:
<http://www.biochar-international.org/nzbiocharworkshop2010>.

For more information on the New Zealand Biochar Research Centre, see the website at: <http://www.biochar.co.nz>.

March 2010 Biochar Symposium Planned in Japan

The Local Human Resources and Public Policy Development System Open Research Centre (LORC) at Ryukoku University is hosting a 1 day symposium themed: Biochar Utilization in Agriculture and Its Contribution to the Revitalisation of Local Society - Citizens Participation in the Global Warming Countermeasures.

The aim of this symposium is to disseminate the message that charcoal can be a useful and important tool for promoting environmentally friendly local regeneration. In the symposium, international trends of the evaluation of biochar in agriculture and the current states of utilisation and standardisation of charcoal in Japan are first discussed, followed by the introductions of some practical activities of Kameoka Carbon Minus Project that involve local citizens.

For more information on please see:
<http://www.biochar-international.org/2010/Japan/LORC>

IBI Website Highlight: Biochar Projects in Schools

Biochar experiments seem a perfect project for schools. Students can learn about the carbon cycle, climate change, and agriculture; set up pot/field trials and track progress; learn about pyrolysis and (with supervision) see how biochar is made; and it gives them the chance to get out and get their hands dirty. In the past few years, there have been some excellent educational materials produced and classrooms as well as independent study students have been setting up biochar experiments and taking their results to science fairs around the world.

IBI highlights both the resources that are available and the projects, experiments, and results from students at our website page K-12 Programs: Biochar in Schools (<http://www.biochar-international.org/teachers/schools>). If you have work to share and would like us to include it, please contact us at info@biochar-international.org.

Regional Biochar Group Updates

To see more information on regional groups, please see IBI's website at: <http://www.biochar-international.org/network/communities>. This month we include updates from the Australia/New Zealand Biochar Researcher's Network, the South East Asian Biochar Interest Group, and the Mongolian Biochar Initiative.

Australia/New Zealand Biochar Researcher's Network (ANZBRN)

Resulting from the 1st Asia Pacific biochar conference 2009 (<http://www.anzbiochar.org/newsandevents.html#one>), a special biochar edition will be published in the Australian Journal of Soil research <http://www.publish.csiro.au/nid/84.htm>, containing talks and posters presented at the conference. Anticipated publication date is July/August 2010.

Federal funding for Australian biochar research has been approved for two national biochar projects, funded by the Grains Research and Development Corporation (GRDC) and the Department for Agriculture, Forestry and Fisheries (DAFF). These projects will characterise different biochar products, assess the benefits of biochar in different agricultural applications, determine its effect on the microbial community as well as the impact on CO₂ and non-CO₂ greenhouse gas emissions and will use life cycle assessment methodology to analyse the greenhouse gas implications for biochar deployment. Updates on both projects and other projects in the Australasian region can be found on the ANZBRN website www.anzbiochar.org/projects.html.

South East Asian Biochar Interest Group

Academics from Universiti Kuala Lumpur; Universiti Putra Malaysia; Santo Tomas University, Philippines; Eritrea Institute of Technology, Eritrea; St. Peter's Engineering College, India; Sheffield University, UK; and Cornell University, USA have been working together in different constellations on various biochar-related projects since 2006. The group participated in the Mondialogo Engineering Award competition with projects titled "Biochar to enhance sustainability of crop production, reduce fertilizer usage and greenhouse effect" and "Application of Biotechnology for the Treatment of Dyehouse Effluents in India and Philippines". Recent research activities (2009) include the production of biochar from rubberwood sawdust and data modelling for optimum biochar production using DesignExpert software. For specific researchers and more information on these topics, please see: <http://www.biochar-international.org/regionalgroups/southeastasia>.

The FAO Regional Office for Asia and the Pacific (FAORAP) is planning to support a biochar related study in the Greater Mekong Sub-Region (GMS) under the GMS Economic Cooperation Program. The study methodology is based on conducting investigations into the potential for adapting biochar to existing agricultural and bioenergy systems. Further information will be available once the terms of reference have been finalized and project participants have been identified.

In conjunction with the University of Edinburgh's UK Biochar Research Centre (www.biochar.org.uk), there are two projects underway in India and Cambodia. The first, *Biochar for Carbon Management, Sustainable Agriculture and Soil Management (BIOCHARM)* involves field trials in India and Cambodia, as well as some analysis in the Philippines. This 12 month project funded through the Asia Pacific Network on Global Change (APN) includes partners from four countries, and it is led by the Appropriate Rural Technology Institute (ARTI) in India. The other partners are the International Rice Research Institute (IRRI), SME Cambodia and the University of Edinburgh. The second, *Participative Distributed Innovation Processes and Biochar: Smoke Reduction, Sustainable Agriculture and Soil Management* received funding through the Asian Institute of Technology (AIT). This project is led by the University of Edinburgh, working closely with ARTI to investigate the potential of gasification cook stoves which produce biochar.

Mongolian Biochar Initiative (MoBI)

A new local NGO, Mongolian Biochar Association (MBA), and a new University research group, Training and Research Institute of Forestry and Wood Industry, Mongolian University of Science and Technology (MUST), have joined the MoBI consortium. MBA together with the Mongolian State University of Agriculture (MSUA) have organized the MSUA Student Biochar Club. They will be involved in the improvement and testing of biochar ovens. They also organized and participated in the local 350.org 12-12 demonstration to encourage significant progress at the Copenhagen meetings.



MSUA/MBA Student Biochar Club in central Ulaanbaatar Mongolia advocating for biochar.

Photo courtesy of Karl Frogner.

The Mongolian Women's Farm Association (MWFA), a MoBI partner, received funding from the Australian embassy to do a biochar training program (and field trials). Preliminary analysis of the grow out trial yielded a 23% increase in potato yield. Follow on experiments are planned for the next growing season. For more information, please see the MoBI website at: <http://www.biochar-international.org/regional/mongolia>.

The MSUA research group has begun work on improving and testing the two low tech biochar oven designs developed in '08 at MWFA which was supported by UBI and partners. These designs will be treated as open source and will be posted on the UBI web site (<http://www.biochar-international.org/regional/ubi>). We invite any interested to participate in the improvement and testing of these designs.