

## Industrial Symbiosis Eco-Industrial Development Section Update



November-December, 2012

Peter Lowitt, FAICP

This update service is provided by the Industrial Symbiosis Eco-Industrial Development Section of the International Society for Industrial Ecology. We welcome your announcements, call for papers and announcements of academic publications, corrections, insights and feedback. Thanks to Reid Lifset and the above image's creator, Matthew Garrett at Yale F&ES, for use of the image.

The Section board consists of Marian Chertow (Professor, Yale U., USA), Weslyne Ashton (Board Secretary and Assistant Professor, Illinois Inst. Technology, USA), Ankit Aggarwal (Student, TU Munich, Germany, Student Member), Professor Shi Han (Board Treasurer and Assistant Professor, City U of Hong Kong, China), Rachel Lombardi (Research fellow U. Birmingham, UK and practitioner with NISP), and Peter Lowitt (FAICP, practitioner, Devens Enterprise Commission USA and board Chair). The board serves for a two year period from 2011-2013.

A Nominating Committee consisting of section members Weslynn Ashton (USA), Bruce Chung (Taiwan), Robin Branson (Australia), Guillaume Massard (Switzerland) and Graham Aid (Sweden) has been created with an eye toward nominating a slate of candidates to be voted on and take office during the June 2013 ISIE Conference in Ulsan, Korea. The Board can include between 5-9 members and the nominating committee has been instructed to take geographic and gender diversity into account with their nominations. If you are interested in serving the section, please let one of the nominating committee members know.

We have other committees which could use your energy and interest.

- Communications: this committee will work on establishing protocols for communicating with members and be responsible for sending out updates. The group should examine the various existing communications platforms and determine how best to communicate with members of the section and non-members. An active Linked In discussion group has been one result of this initiative. ([http://www.linkedin.com/groups?about=&gid=1845383&trk=anet\\_ug\\_grppro](http://www.linkedin.com/groups?about=&gid=1845383&trk=anet_ug_grppro)). We encourage you to join up and add to the discussion. The active exchange of ideas on this site ranges from discussions of orange by-products as a source for biofuel to discussions of parallels' between the financial and climate crisis (see below for a summary of this update's topics).
- Programming and events: this committee will work on defining (co-)sponsorship of events, assist in planning events; determining ways goals and deliverables for the section, examining ways to fund initiatives such as PhD student exchanges or graduate consortium events. The 10<sup>th</sup> Annual Industrial Symbiosis Research Symposium (ISRS) will take place the day before (June 24) the ISIE Conference at the University of Ulsan in Ulsan, Korea next June 25-28, 2013. Professor Hong Sue Park will chair the 10<sup>th</sup> ISRS which will be co-sponsored by our Section and Yale University. Professors Shi Han and Weslynn Ashton have been appointed by the chair to review presentations submitted under the EID/IS track for the 2013 Ulsan ISIE Conference next June.
- Database and information sharing: this committee will work on determining the best means of sharing information about projects and synergies, utilizing existing platforms or suggesting new ones, and working together to organize this initiative. We need volunteers for this committee. Graham Aid is working with other section members (including Chris Davis and Antonis C. Kokossis) to investigate establishing a useful database of exchanges. Anyone interested in participating in these discussions should contact Peter Lowitt (peterlowitt at devensec dot com). A conference call is planned for later this month (January, 2013).

**Linked In Questions and IS Case Studies:** Much thanks to Ines Costa for starting this group. The following are some of the recent postings. Be sure and go to our Linked-in site for more in depth information on these and other items. This effort assists the Section in implementing our communications plan.

Andrew Zingale started a thread on IS for Data Centers.

Artem Golev started a discussion of the Gladstone Industrial Symbiosis Study

Roman Sacchi started a conversation around “an intelligent way of reusing production waste from the renewable energy industry.”

### **Conferences, workshops, courses and other events**

- 2013 International Society for Industrial Ecology Society Conference, 2013, Ulsan, Korea
- The organizing committee of the 6th International Conference on Life Cycle Management invites you to attend the conference in Gothenburg 25-28 August 2013. Theme of the conference will be: Perspectives on managing life cycles. This theme focuses on local versus global perspectives in life cycle work, roles and responsibilities in product life cycles and value chains, and conceptions of sustainable product life cycles and value chains. Topics covered by the conference are listed below and described further at [www.lcm2013.org](http://www.lcm2013.org).
- Clinton Global Initiative Announces Sustainable Waste Foundation Clinton, USGBC to Promote ‘Climate Positive’ Urban Projects. The Clinton Global Initiative announced the launch of the Foundation for Sustainable Waste Resources, an initiative of the Cason Family Foundation, with partner D-Waste to address health and environmental problems caused by billions of tons of waste produced worldwide. The foundation’s first initiative will be to partner with organizations, companies and NGOs to create an interactive global map of waste management systems. The global partnership will develop specific metrics and indicators, allowing the public to follow the progress achieved in waste management and its related health and environmental impacts. The map will be created through development of a platform using IT, GIS, databases and mobile applications. Existing databases and sources will be merged and uploaded into a single database. The foundation will host the database and provide data and mapping services. The foundation will identify locations of significant amounts of waste and then work with the waste management industry, including collectors, developers and governments to find ways to convert that waste into valuable resources. The foundation said it also will work to design a set of principles that includes rules of engagement for the acquisition of secondary raw material and the incorporation of waste pickers into the supply chain in a cost effective and responsible manner. Jill Boughton will serve as the foundation’s CEO, beginning January 1, following her retirement from Proctor & Gamble. The Clinton Global Initiative has launched several energy efficiency and emissions and waste reductions programs in recent years. Last year, the organization launched a three-year project aimed at increasing energy efficiency in US buildings with Goldman Sachs, Greenprint Foundation, Johnson Controls, Jones Lang LaSalle, Malkin Holdings LLC, the Natural Resources Defense Council, Vornado Realty Trust and YR&G.
- 2013 Call for Guardian Sustainable Business Award

“This call is launched by The Guardian for those businesses that face unique challenges in driving sustainability. Innovation is one of the most important award categories which enables businesses to add value by demonstrating that business really can be done differently.” Our friends at the Greening of Industries network asked that we pass this announcement along.

For further details about this call please look at the website:

<http://www.guardian.co.uk/sustainable-business/gsb-awards?CMP=>

- The Symposium on Industrial Ecology for Young Professionals (SIEYP III)  
The ISIE Student Chapter is pleased to announce the third Symposium on Industrial Ecology for Young Professionals (SIEYP III). This symposium is specifically designed for young professionals, including graduate students and post-doctoral researchers. The primary goal of this symposium is to provide an opportunity for young professionals who perform research in the area of industrial ecology (IE) to present their ongoing research, receive constructive feedback, and network with senior professionals in their fields. In particular, the event will enable young professionals to establish a network of IE researchers for ongoing exchange and future collaborations.

The symposium, held at the University of Ulsan, South Korea on June, 2013 immediately follows the International Society for Industrial Ecology conference (ISIE ULSAN 2013) at the same location. The symposium is free of charge.

- See a constantly updated list of relevant events on the ISIE webpage (Currently over 20 upcoming events listed!) <http://www.is4ie.org/events>
- The US Business Council for Sustainable Development will be holding its winter meeting in Austin, Texas February 6-7, 2013. For more information and to register <http://winter-meeting.usbcسد.org>
- The US Business Council for Sustainable Development’s summer meeting will be on July 17-18, 2013 at Yale University in New Haven, Connecticut.
- Going Green – CARE INNOVATION 2014: Towards a Resource Efficient Economy which will take place in Vienna (Austria) from November 17-20, 2014. All information on [www.care-electronics.net/CI2014](http://www.care-electronics.net/CI2014) will be continuously updated.
- Call for Papers for International Symposium on Sustainable Systems and Technology 2013 to be held in Cincinnati, Ohio 15-17, May 2013 at the Marriott Kingsgate Hotel.

## **Publications and presentations of interest:**

- Call for papers: You are cordially invited to submit or recommend an article to the Open Journal of Ecology (OJE, ISSN: 2162-1993), a fast track peer-reviewed and open access academic journal, which is published by Scientific Research Publishing (SCIRP). OJE covers many aspects in Ecology, and more detailed information can be found at: [www.scirp.org/journal/oje](http://www.scirp.org/journal/oje).
- Check out the web site of the Creative ReUse Association launched by the ReUse Alliance <http://www.reusealliance.org/projects/cra>
- The final report and recommendations from the 1st International Working Conference on Applied Industrial Symbiosis held this past June have been

released contact maggie dot morrissey at international-synergies dot com for your copy.

- Call for papers for the EnviroInfo 2013, 27th Intern. Conf. on Informatics for Environmental Protection which will take place in Hamburg, Monday Sep. 2nd - Wednesday, Sep. 4th, 2013. Electr. Submission of extended Abstracts: March 31, 2013 Notification of Acceptance: May 17, 2013 Submission of final Manuscripts: July 2, 2013. Further information and the application form can be found here <http://www.enviroinfo2013.org/>
- ISIE Student Chapter Newsletter was released. If you have any feedback, ideas or would like to contribute in any way to our next newsletter, please contact us at [isiestudentchapter@gmail.com](mailto:isiestudentchapter@gmail.com). More information about the student chapter can be found at <http://www.is4ie.org/students>
- Application of Industrial Symbiosis for Sustainable Industrial Development presented by P. Purwanto at the International Conference on Chemical and Material Engineering 2012 in Semarang, Indonesia.
- Sarah Moore in a November 11, 2012 issue of the Financial Times writes about the Cement Industry in an article entitled “Cement: Matching up Companies is a Move to a World Without Waste” in which she addresses the industries role in catalyzing industrial symbiosis exchanges.
- Peter Layborn blogs about his visits to promote industrial symbiosis in North America, including visits to Vancouver, BC, Canada and Concordia University in Montreal followed by a visit to Mexico and meetings with SEMARNAT, the Environment and Natural Resources Ministry of the Mexican Government at an Industrial Symbiosis forum.
- Jennifer Shockley writes at <http://greenbuildingelements.com/2012/12/01/eco-industrial-parks-and-steam-loop/> an interesting piece on steam loops as a component of eco-industrial parks.

## **Eco-Industrial Development and Industrial Symbiosis in Practice:**

### **Eco-Industrial Projects:**

**COUNTRY: USA**

**Massachusetts:**

**North Carolina:**

**Minnesota: Ohio:** Season’s Green Eco Industrial Park in Hudson, Ohio began construction of the street system for the industrial park in mid November, 2012.

**Wyoming:** James Murray writes that Microsoft is debuting a sewage powered data center. Working with Fuel Cell Energy, Inc., on this pilot project in Cheyenne, Wyoming which will see fuel cells converting biogas to electricity from the Dry Creek Water Reclamation Facility.

**COUNTRY: Thailand** PPT plc proposes to develop Eco-Town in the Rayong Map Ta Phut area into an eco-industrial zone.

**COUNTRY: Malaysia**

**COUNTRY: United Kingdom**

**Northern Ireland:**

**COUNTRY: Azerbaijan** Baku. The project to construct this Eco Industrial Park was tendered in late November. Its goal is the “establishment of Balakhani Eco-Industrial Park that is being created according to the Decree of the President of the Republic of Azerbaijan Ilham Aliyev dated 28 December 2011, in order to provide development of recycling industry in our country, to increase young entrepreneurs’ interest in this field, future plans and green business opportunities. It was also mentioned that waste management is not only a process providing environmental protection, if proper management and mechanisms are used, it can also be a business opportunity supporting healthy social-economic development.”

**COUNTRY: Australia**

**COUNTRY: China.** In Shuozhou, the China Daily News writes that the coal industry is able to use new technology to utilize “gangue, which refers to surrounding rocks once considered to be commercially worthless” and mine coal ash. Another park was recently launched in China, the “Xintai Circular Economy Park is located south of Loude Town of Xintai with planned area of 14 square kilometers. It’s next to Jining city in the south and Ningyang county in the west. Relying on Shandong Liaherd Chemical Industry Co Ltd, Shandong Huayang Pesticides Group, and Taishan Salt Chemistry Group, the park has developed a circular economy structure that features recycling of upstream and downstream products, long industrial chain, and radial expanding. The park has been equipped with complete infrastructure facilities;” according to its on line promotional literature.

**COUNTRY: Sweden**

**COUNTRY: Nepal**

**COUNTRY: Philippines**

**COUNTRY: Vietnam**

**COUNTRY: Canada** Edmonton, Alberta. Gilead, Alberta a biopharmaceutical company, announced the purchase of 10 acres with in the Eco Industrial Business Park in North east Edmonton in December, 2012.

**COUNTRY: Belgium**

**COUNTRY: Switzerland**

**COUNTRY: Norway**

**COUNTRY: Denmark.** “The Danish Bioenergy team (Roskilde University and Region Zealand) assists the Kalundborg symbiosis center and local companies in redesigning the energy system. The Bioenergy Promotion 2 project provides vital knowledge inputs to the key stakeholders about sustainable bioenergy resources and efficient conversion routes.” The lessons of Kalundborg are being applied to other areas within Zealand through this collaboration as Kalundborg begins to explore diversifying its energy sources beyond coal and into bioenergy sources. “The greening of the symbiosis also requires integration between the industrial symbiosis and the renewable energy base in the region with a special focus on the agriculture which in Denmark is the main supplier

of local bioenergy resources such as manure for biogas production or straw for combined heat and power incineration.”

**COUNTRY: Italy** Prato, Tuscany: 1<sup>st</sup> Macrolotto Industrial area is looking for Energy Service Companies (ESCOs) who are interested to apply, within the industrial area known as 1<sup>st</sup> Macrolotto of Prato (Italy), the recent new agreement regarding the regulation of the Tuscany Region for the construction of photovoltaic plants as part of the Italian funding program known as “V° Conto Energia”. Through this agreement, the Tuscany Region aims to further develop the use of solar energy between citizens and small and medium-sized enterprises. This is aimed at promoting the relationship between the Energy Service Companies (ESCOs) and those interested in installing a PV system without incurring costs.

I think that is a good opportunity to apply these financial contributions to a whole big industrial area like the 1<sup>st</sup> Macrolotto. Contact Ing. Jacopo Cartoni

**COUNTRY: Tunisia**

**COUNTRY: Netherlands**

**COUNTRY: Finland**

**Country: Bahamas**

**COUNTRY: Brazil:**

**COUNTRY: Japan** Kyoto Industry Eco-Energy Promotion Organization Established. The Kyoto Consortium for industrial development announced on July, 2012, that it has reorganized the Kyoto Industry Eco Promotion Organization and renamed it the Kyoto Industry Eco-Energy Promotion Organization. The consortium aims to construct an industrial support system for the next generation by all related parties in Kyoto in order to help small and medium-sized enterprises to make further progress in developments.  
<http://www.japanfs.org/en/pages/032389.html>

**COUNTRY: Korea**

**COUNTRY: Nigeria**

**COUNTRY: Germany**

**COUNTRY: Hungary and Slovakia**

**COUNTRY: India.**

**COUNTRY: Trinidad and Tobago** The Tobago House of Assembly has authorized the construction of the first Factory Shell for the Cove Eco-Industrial Park.

**COUNTRY: Romania**

**COUNTRY: Singapore.**

**COUNTRY: South Africa.**

**COUNTRY: Turkey**

## **Professional Changes and Opportunities:**

### **Job Changes and Section news:**

Section member Anthony Chiu has been re-elected Secretary of ISIE and section member Hong Suck Park has been voted onto the ISIE Council and Shi Han has been elected to the nominating committee for ISIE. Congratulations to our section members on their elections.