

Industrial Symbiosis Eco-Industrial Development Section Update



January-March, 2013

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 Weslyne 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.

The Committee is pleased to put forth the following slate of candidates (their bios and position statements will be posted to the section web site shortly):

Dr. Gemma Cervantes; Dr. Tsuyoshi Fujita; Dr. Marian Chertow; Robin Branson; Peter Lowitt, FAICP; Wouter Spekkink (student); Guillaume Massard; Dr. Shi Han.

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). 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 *10th Annual Industrial Symbiosis Research Symposium (ISRS)* will take place two days before (June 23-24) the ISIE Conference at the University of Ulsan in Ulsan, Korea this June 25-28, 2013. Professor Hong Sue Park will chair the 10th ISRS which will be co-sponsored by our Section and Yale University. The agenda for the 10th ISRS is posted on the ISIE Conference website. Please visit "<http://isie2013.ulsan.ac.kr/main>
- 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. 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). Graham and his talented team will report on their progress at the Conference in Ulsan.

The Agenda for the 10th Industrial Symbiosis Research Symposium will be posted on the section web site shortly. Dr. Park has expanded the program to two days of activity in Ulsan prior to the ISIE Conference. In addition to the ISRS, **approximately 50 presentations** about eco-industrial development and industrial symbiosis are scheduled for the ISIE Conference in Ulsan this June.

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.
- 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.

- 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 summer meeting in New Haven, CT at Yale on July 17-18, 2013. For more information and to register <http://summer-meeting.usbcsd.org>
- 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 will be continuously updated.
- 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.
- Silvia Leahu-Aluas, Sustainable Manufacturing Consultant, in an February 23, 2013 article calls for Reshoring into American Eco-Industrial Cluster's in the Digital Manufacturing Report.
- Check out the web site of the Creative ReUse Association launched by the ReUse Alliance <http://www.reusealliance.org/projects/cra>
- "Growth, Benefits and Challenges of Eco-industrial Parks" written in January on John Macaulay's blog.
- 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. More information about the student chapter can be found at <http://www.is4ie.org/students>
- 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.

Eco-Industrial Development and Industrial Symbiosis in Practice:

Eco-Industrial Projects:

COUNTRY: USA

Massachusetts:

Arizona: Tucson, the Swan Industrial Park has streets name ReUse and Eco Industrial Drive.

North Carolina: Charlotte – various news outlets report further progress on Tom McKitterick’s efforts to redevelop the former textile dye site and former Clariant Plant as an Eco Industrial Park. North Carolina Governor Pat McCrory announced the deal for ReVenture West, near the National Whitewater Center in northwest Charlotte. Continued good luck to Tom and his crew who have impressed all of us who have learned of his efforts. Check out ReVenture Eco Industrial Park on the web.

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.

Vermont: Burlington, Intervale Eco-Industrial Park anchored by a 50 MW wood chip fired Biomass plant has a brewery on site and numerous farms and farm related uses. This park has been operating now for twenty years. John Macaulay has written a nice piece on Intervale on his blog.

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: 1st Macrolotto Industrial area is looking for Energy Service Companies (ESCOs) who are interested to apply, within the industrial area known as 1st 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 1st Macrolotto. Contact Ing. Jacopo Cartoni

COUNTRY: Tunisia

COUNTRY: Netherlands

COUNTRY: Finland Rantasalmi, Finland’s first planned eco-industrial park is written up in John Macaulay’s blog as well. He writes “A wood waste-burning electricity plant supplies electricity and excess heat to a cluster of businesses nearby. A log house manufacturer, carpenters, transport company and window and door frame factory operate side-by-side, providing their waste wood and sawdust to the plant. Businesses at Rantasalmi aim to increase their collaboration over time, improving material and energy efficiency, reducing waste and limiting emissions. All agreed to and signed a common environmental policy.”

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.