

EID/IS Section Update

April-August, 2013

Peter Lowitt, FAICP

PUBLICATIONS AND PRESENTATIONS

Partners in Project Green

The Partners in Project Green Pearson Eco-Business Zone Policy Toolkit is available on-line: [Check it out.](#)

ECOVER of Belgium featured in Reuters June 10, 2013 article

"Ecover argues its customers are buying into an entirely green process. The roofs on its plants in Belgium and northern France allow them to use no heating or air conditioning. Next year, its bottles will contain plastic recovered from the sea.

In recent years, major producers have also focused on cutting their carbon footprint, using less or more recycled packaging and selling cold-wash formulas, a big plus for consumers in an era of high energy bills.

Ecover is among a number of producers that are developing surfactants - the compounds that act as the cleaning agent in most

EID/IS Section of the International Society of Industrial Ecology election results:

Congratulations to the new and returning section board members: Peter Lowitt, FAICP (USA) returns as chair, Shi Han (China) returns to the board as well, Guillaume Massard (Switzerland), Gemma Cervantes (Mexico), Ines Costa (Portugal), Robin Branson (Australia), Wouter Spekkink is our student representative (Holland), Jooyoung Park (Korea), and Toyushi Fujita (Japan) are our new board members.

IS Data Base News

[Check out the WIKI](#) our IS DATA BASE Committee has created.

Very impressive work by Graham Aid and his initial team of collaborators (George Lignos, Antonis Korkofigkas; Antonis Kokossis, Chris Davis) who took their idea further during the 7th ISIE Conference in Ulsan through the use of a student Hack-a-thon which further evolved the Wiki. Many of the conference attendees promised to help populate the database of industrial symbiosis exchanges which launched during the conference. Shortly after returning from Ulsan we received news that Gijsbert Korevaar of TU Delft had been similarly inspired by this event. He writes "Hi colleagues, inspired by our meeting and discussion in Ulsan last month, I took the liberty to submit a proposal for a PhD position linked to the IS Data project. Just yesterday, I got the news that Climate KIC (an European consortium of academia and companies on climate reduction) has granted our proposal and that **we can hire a PhD student** on their behalf. Great news! Soon, we will start the selection of a candidate and I am certain that our new student will seek contact with you later this year. If you have an excellent student in your network or classes and you want to recommend that person to us, feel free to do so!"

Wow! Great job Gijsbert and if you are an interested PhD Student, please follow up with Professor Korevaar.

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CONFERENCES, WORKSHOPS, COURSES AND OTHER EVENTS

Eco-Districts Summit

Boston, MA November 11-14, 2013

The organization has a focus on urban development. Eco Industrial Development has a place in the equation around providing jobs for urban dwellers.

Check out the [website](#).

Workshops on Sustainable Industrial Estates: Understanding Eco-Industrial Estate Concept and Its Aspects

products by lowering the surface tension of a liquid - derived from plants rather than petroleum to sever their relationship with what is considered a polluting industry.”

Finland: Strategic eco-industrial networks

Objective of the project

The objective of the research of strategic eco-industrial networks is to facilitate the development of new eco-industrial networks that advance dematerialization. Specifically, the study will answer the research questions:

1. What forms of eco-industrial network with the potential to advance environmental sustainability can be identified in the literature? What is the principal operational logic and architecture of these network forms?
2. What kind of existing industrial networks have the potential to transform towards strategic eco-industrial networks?
3. What are the drivers for the development of radically new strategic eco-industrial networks? Where, how and by whom are they initiated?

Performance of the study

The project will be carried out between 1.4.2012 – 31.10.2014 as a part of DemaNet project. DemaNet is part of the Tekes Green Growth technology program. Strategic Eco-Industrial Networks – project is performed by Lappeenranta University of Technology and University of Jyväskylä. The project started in 2012 by a systematic literature review about forms of eco-

EID/IS News from around the world

Rayong, Thailand

A group of giant industrial firms has come up with three missions to make Rayong's Map Ta Phut Industrial Estate more environmentally friendly under the concept of an eco-industrial town. The Community Partnership Association says the missions are to develop green operations, ensure the community's well-being in terms of health care and education and coordinate news between the industrial estate and surrounding communities, said Kun Patumra, who heads the CPA.

Case Study - Kawerau Industrial Symbiosis Project – New Zealand

The Shaper Group have been engaged by the New Zealand Department of Trade and Enterprise to advance the application of industrial symbiosis as a tool and process to attract international investment to New Zealand in the area of advanced manufacturing, clean technology and renewable energy. We have applied our sustainability business case and industrial symbiosis methodologies to identify areas of existing natural and social capital in various regions that would have international competitive advantages. In particular we have applied a high level of stakeholder engagement that has identified at least 19 new business opportunities in the Kawerau region. This project continues as we move now into a deeper analysis of the opportunities including investment requirements and job creation. The activities conducted to date (May, 2013) include:

- Developed a background briefing paper on Industrial Symbiosis which included global best practices
- Development of strategic framework and vision for application of Industrial Symbiosis in New Zealand
- Engagement with key stakeholders including facilitation of community meetings and discussions with all key project stakeholders
- Development of findings report and symbiosis flow maps
- Presentation of findings

China is committed to Eco-Industrial Park Transformation

BEIJING, Beijing, June 21 (Xinhua) (Dong Guan Yang) Chinese official launch in June this year for the first time the 'National Low Carbon Day.' When a low-carbon economy has become the trend of industry as the economic cell must do something. Chinese Ministry of Science, Technology and Environmental Protection Division Long Zhao Yingmin 21 in accept - Reporters interview that build industrial 'food chain' to achieve convergence with the raw material waste recycling, eco-industrial parks in China are exploring low-carbon transition path.

Indonesia: 24-27th June 2013

A 4-days workshop will be conducted to bring together and engage representatives from the Ministry of Industry and related ministries, Indonesian industrial estate management, industrial estate association (HKI), and other related stakeholders to have a common understanding on the concept of eco-industrial estates.

International and national experts from GIZ will support the participants in building their capacity and increasing their knowledge in understanding the eco IE concept and its aspects. It is expected that by the end of the workshop all of the participants will have a common understanding of the eco IE concept as a whole, its aspects, and furthermore will be able to support Ministry of Industry in developing and improving the Indonesian standard of eco IE.

MIT Climate CoLab

MIT Climate CoLab is currently accepting proposals on what should be done about climate change. There are 18 different topics on everything from agriculture and forestry to urban adaptation. By spreading the word, if one of your friends (or a friend of a friend of a friend, etc) wins the \$10,000 Grand Prize, you'll win a share of the \$2,000 referral prize!

Visit [the website](#) to find our more.

Western Cape Industrial Symbiosis Facilitator – South Africa

A new program is being launched in the Western Cape area of South Africa to promote industrial symbiosis. The program was staffing up over the summer.

industrial networks which have the potential to advance environmental sustainability. Then, during 2013-2014, Lappeenranta University of Technology will concentrate on potential of existing industrial networks to transform towards strategic eco-industrial networks and University of Jyväskylä will study the development of radically new strategic eco-industrial networks.

Outcomes of the project

The study creates new knowledge about the forms of eco-industrial networks in advancing environmental sustainability by integrating insights from the literature streams of industrial networks, industrial symbiosis, and interorganizational research. The study also increases the understanding about the development of strategic eco-industrial networks by identifying opportunities and modes to develop existing networks towards more sustainable and the potential for create radically new strategic eco-industrial networks to advance dematerialization and increase competitiveness.

More information

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Linked-In and IS Case Studies

Check out our [Linked-In page](#)

It is understood that eco-industrial demonstration park industry chain mainly through rational planning, foster eco-industrial network, improving energy efficiency and productivity. Park construction involves adjustment of industrial structure, infrastructure, technological innovation and environmental governance and other aspects, covering production, circulation and consumption of all sectors, to achieve economic development and ecological protection coordination integration(<http://www.best-news.us/>).

Environmental Protection Department data show that as of May 2013, China has built Shanghai Jinqiao Export Processing Zone, Tianjin Economic and Technological Development Zone, Guangzhou Development Zone and other 20 national eco-industrial demonstration park, and another 60 ongoing ecological zone industrial park construction.

National eco-industrial demonstration park construction Coordinating Leading Group Office official Zhaoying Min said, 'eco-industrial park is relying on the industrial chain to achieve 'food chain' loop ', the previous environmental pollutants are generally on the end of treatment, but the 'conservation of matter.' so that enterprises cannot be zero-emission, eco-industrial park will be able to adjust the industrial chain organization, so that the waste becomes his own material, resulting in recycling economy effect, energy saving effect is better than a single enterprise sewage constraints.

On the performance of eco-industrial demonstration park, the Ministry of Environmental Protection officials, in 2-4 years of construction period, 20 state-level eco-industrial parks industrial added value of an average annual increase of 59%, while the weighted unit energy consumption decreased by 23% industrial waste generation decreased by 30%, sulfur dioxide emissions decreased by 65% of solid waste generation decreased by 32%, both higher than the national average.

Since its launch in 2001 ecological industrial park transformation now, more than ten years, China built a total of 20 state-level eco-industrial demonstration park this regard, the ministry official also admitted that 'really promote slower.' According to its analysis, mainly because many governments, businesses still GDP-oriented development concept, in addition, the park various environmental indicators 'strict, high', support for advanced scientific and technological innovation required to make many enterprises have been 'shut out.'

However, Zhao Yingmin opinion, national eco-industrial park to promote the concept of 'Ningquewulan.' Construction of the park is intended to establish a benchmark, a high level of 'pioneer, leader (Finance News <http://www.best-news.us/>).'

The so-called 'leader' is through epitaxial effect, diffusion to the surrounding industrial areas, transfer of experience in environmental protection ministry official view, 'as long as the direction of continuous improvement, even if the short-term is also below the high standards of progress.' In fact, the eco-industrial park industrial, residential and leisure integration will achieve 'production city city' from the farm to the industrial park area and then a part of the development of the city, it is the expansion of urbanization.

According to reports, China's state-level eco-industrial park construction mainly through 'the cage for birds,' the introduction of new businesses, the way updates are not standard enterprise carried on ecological transformation of existing parks. Currently, the ecological transformation in national development zones high-tech zones as a precursor to the 'green card' to attract business. Of course, the national eco-industrial park development, but also with the overall level of economic and social development in harmony. Statistics show that currently has built 20 eco-industrial parks are located in Shanghai, Shandong, Jiangsu, Guangdong and other eastern provinces, under construction The 60 parks began to extend to Inner Mongolia, Shaanxi, Guizhou and other western provinces. "Beautiful China' is the inner beauty and outer beauty combined.' Zhaoying Min told reporters, sky blue to green water clear of the 'external' environment the United States is important, but in economic development through the concept of ecological civilization, solid circulating low-carbon industry development path is not be missing 'inner beauty' (Best News June 26, 2013).

Cove Eco-Industrial Park Gets First Tenant – Trinidad

The Cove Eco-Industrial and Business Park has welcomed its first local tenant, Rojas Engineering Limited which is owned by metal fabricator Deon Rojas. The company has been commissioned and will open for business early next month (July, 2013). The company was assisted by the Business Development Unit's Loan Funding Programme. It occupies the lower floor of the Isaac T McLeod Building and will be focusing on metal fabrication. Rojas said now that his business is fully functional, next on his agenda is widespread marketing in Tobago.

Creative Vision Eco-Industrial Park – Zhongshan, China

The Torch Zone recently signed the "China Zhongshan Creative Vision Eco-industrial Park" project with Beijing Digisea Company. The Eco-industrial park is expected to attract at least 200 cultural and creative enterprises and to become a state-level cultural and creative base within 5 years.

Covering an area of 380 thousand square meters, Zhongshan Creative Vision Eco-industrial Park is located at The New Town of Science and Technology, the CBD of the Torch Zone. So far, the Eco-industrial park has almost finished the first-stage project which is supposed to attract industries such as industrial design, cultural and creative industry, cartoon creative industry, software design, and so on. By Paula Pan.

Calor Energy North Carolina, USA Eco-Industrial Consultant

The firm specializes in vetting eco-industrial opportunities. Its web page states: "We work with brownfield redevelopers who are concerned about reusing the existing power infrastructure on their sites. Our clients are interested in developing energy production but frustrated by the difficulties of finding off-take energy users to co-locate with their facility. They may want to explore district steam or heat for industrial processes, but are not certain which renewable technology or energy feedstock will provide the best financial return. Often, our clients do not have a roadmap through the intricacies of eco-industrial development."

"At CALOR, we thread the needle of the technical, financial and regulatory feasibility of the multiple options for the brownfield and eco-industrial developer. Each situation and location is unique. Sometimes the answer is NO, it's not feasible to install a particular system at a particular location, or reuse the infrastructure of a particular site. And sometimes the answer is YES, it is technically and financially feasible. If YES is the right answer, CALOR assists clients in seeking tax and equity investors and lenders, in selecting the best EPC (Engineering, Procurement, Construction) for the project, and in drafting regulatory and utility roadmaps in coordination with our clients' attorneys and accountants."

Green Industrial Symbiosis Program Launched in North Denmark

In the region of North Jutland in Denmark, the "Network for Sustainable Business" coordinates and manages current industrial symbiosis activity. Its focus and efforts are directed throughout the region. Green Industrial Symbiosis is a collaboration between Network for Sustainable Business Development and North Denmark Region.

Innovista Eco Industrial Park, Hinton Alberta, Canada

Innovista Eco-Industrial Park holds true to its eco-industrial vision as its Town Council voted to reject an offer from a company to locate a firm which they found incompatible with the community's vision for the park. The council's decision made news over the summer.

Andina, Peru: First Peruvian EIP

The first Peruvian EIP in the northeastern Ucayali region, will foster sustainable economic growth across the Amazon regions through a joint effort of regional government and business sector, Peru's Production Ministry (Produce) has reported. The said industrial park will aimed at seeking cooperation between businesses and local communities in order to increase economic gains and improve the environmental quality by an effective utilization of natural resources and energy and, thus, stimulating ecosystem. The project, which is slated to start operations soon, will allow to develop an value-added forestry industry in Pucallpa and will span across a 44 hectare site, including roads, services and green areas. The EIP will host 166 companies from several sectors such as metallurgy, agribusiness, sawmills, carpentry, trade and other micro and small enterprises (MSEs).

Japan: Kawasaki Eco Town Article in SUN Newspaper July, 2013

Goh Ban Lee

"TO most visitors, Kawasaki, like most cities in Japan, is clean and has an efficient public transportation system and crowded shopping malls. It is also fair to believe that many Malaysians have not heard of Kawasaki, a city south of Tokyo.

But to people interested in sustainable development, it is a success story. Kawasaki is not only vibrant, but also an industrial city without much waste. In short, it is an eco-city.

For example, factories in Kawasaki have not only installed state of the art waste abatement devices and procedures, but some also use the wastes of others to produce useful products. The term "venous industry" is often used in this city, the term referring to the industry which turns solid waste into reusable resources and then uses them to produce usable goods.

Kawasaki's significance is that it is not an eco-city newly minted out of virgin land, such as Tianjin Eco-City, to be completed in 2020 and showcasing the latest energy-saving technologies; or Masdar City, a new LED city in Abu Dhabi.

Kawasaki was already an industrial city before the Second World War. The post-war period saw a rapid increase in heavy industries, including large-scale power plants, petro-chemical complexes, steel and cement plants and refineries. Then there were the numerous heavy vehicles that transported raw materials and finished products. As a result, by the 1960s, while Japan was achieving unprecedented growth, the city suffered severe air and water pollution, many residents having chronic bronchitis.

Anti-pollution initiatives were introduced in the 1970s, with laws enacted to make it compulsory for factories to install pollution abatement devices, and strict monitoring systems in place.

These measures were not adopted automatically. They were largely the result of the persistence Kawasaki residents who initiated numerous law suits against polluting factories and government agencies.

In 1997, Kawasaki drew up a plan to create an eco-town in which “the environment and industry would co-exist in harmony”. By 2002, the city was able to have a zero-emission industrial complex. Today, it is generally noted not only as the first eco-city in Japan, but also the world.

Kawasaki is not only a clean and environmentally-friendly city, but it has also become an ardent campaigner for eco-cities and the minimisation of wastes. Government agencies and business corporations are playing critical roles in pushing for eco-town initiatives. For example, the city is in partnership with the United Nations Environment Unit’s International Environmental Technology Centre to facilitate the development of eco-towns in the Asia Pacific region. One participating “city” is Penang.

Besides workshops in Asian cities to familiarise government officers, non-governmental organisations and factory managers with sustainable development strategies, Kawasaki also holds an annual conference to monitor steps taken to implement eco-town initiatives. It plays host to annual eco-tech fairs for the exhibition of new initiatives, products and energy-saving technologies developed by both the private and public sectors in the advancement of sustainable development.

Apart from technology and science, Kawasaki has not forgotten the arts and culture. Efforts towards this end include the new Fujiko F Fujio Museum which features the ever popular cartoon Doraemon and his friends. Mayor Abe Takao is so proud of the museum that his calling card carries the cartoons.

Kawasaki planners and engineers also pay attention to the people. The city has facilities for pedestrians and cyclists that are not only clean, but are also unobstructed by parked vehicles, hawker stalls etc. Public transportation facilities are excellent and cater to all, including the physically handicapped. In heavy traffic areas, there are stairs, escalators and lifts to suit different needs.

It is also notable that the residents of Kawasaki are civic-conscious. They help facilitate the smooth flow of traffic, for example, standing on the left side of the escalator to leave room for those who want to pass. The streets are safe. Individuals, including women, walk alone even late at night.

In the development of eco-cities, apart from technology and science, attention must also be paid to the behaviour of the people.”

Datuk Dr Goh Ban Lee is senior research fellow at the Penang Institute, interested in urban governance, housing and urban planning.

Moby Disc Featured at Nines Festival at Devens, MA, USA August, 2013



The sculpture is created from CD discs.

Dundalk Eco Industrial Park, Southgate, Ontario, Canada

Arguments reignited late this summer (August, 2013) over access to the Eco Industrial Park over the objections of nearby residents in Southgate, Ontario.

Camden Eco-Industrial Park, Camden County, North Carolina Featured in June, 2013 – Virginia Pilot Newspaper Article

"After two years on the market, a vacant green business park on U.S. 17, 2 miles south of Chesapeake, is attracting new interest - including an industry that could bring 400 jobs.

County emails show inquiries from eight companies, including a large firm specializing in refitting equipment for the military, two solar companies and a wood-pellet manufacturer. All but one contacted the county in the past six months.

The largest firm seeks a 15-acre lot in the 77-acre Camden County Eco Industrial Park and could hire as many as 400, said Charles Bauman, the county's industry recruiter and longtime economic developer from Hampton Roads. The other companies would hire fewer than 50 people. Names of the companies were not released.

"Even cities like Chesapeake are hard-pressed to find acreage for a large manufacturer," Bauman said. "Now that we can drive in and visualize this big business location, it's incumbent upon us to ramp this up."

The park was first proposed six years ago, and its success seemed to be a long shot as the property lacked utilities and companies backed out after initial interest in the site. But nearly \$6 million in grants helped fund installation of water and sewer lines and the new roads. Hurricane Sandy and other storms delayed road construction as crews were tied up doing repairs on the Outer Banks, said County Manager Michael Renshaw.

Planned around an approximately 23-acre pond, the park offers 18 lots of 2 to 5 acres, valued at about \$90,000 per acre, according to an appraisal done two years ago for the county. But smaller lots can be combined into a larger one, Bauman said.

New paved roads pass through stands of large trees. Man-made wetlands under construction will serve as stormwater collection areas, adding to the natural ambience. The pond is stocked with fish. There are plans to add walkways and benches, and piers on the pond.

Businesses recruited will have light ecological footprints of their own, and green missions such as recycling or producing alternative energy. Heavy manufacturing, junkyards and fast food restaurants will not be allowed.

Two years ago, a solar company proposed locating there and another company planned a green business incubator before plans dissipated. The latest string of inquiries are the most yet and appear to be solid, Bauman said.

The project brings the prospect of an influx of jobs to an agricultural county. More than eight out of 10 of its workers commute elsewhere for jobs, according to the North Carolina Department of Commerce website.

The county has put together a packet of information plugging the site's proximity to Hampton Roads and its ports, including the widening of Dominion Boulevard through Chesapeake, an improvement that will

significantly shorten the usual 45-minute drive from Camden to Norfolk.”

Jeff Hampton, 252-338-0159, jeff.hampton@pilotonline.com

***City of Red Deer, Alberta, Canada Incorporates Eco-Industrial Concepts into
Municipally Owned Industrial Park***

Local news sources report that the City of Red Deer has incorporated Eco-Industrial concepts into land it is marketing as part of the Queens Business Park in that city.

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