



Sustainable Industrial Network and its Applications on Micro Regional Environmental Planning (SINET)

First Expert Group Seminar

24th November' 2006

Venue: Magnolia Hall, India Habitat Centre, Lodhi Road, New Delhi, India

Minutes of the Seminar

The seminar began with Mr. Shisher Kumra, Director, EU Coordination, International Council of Swedish Industry (NIR), giving a background of the SINET initiative to the external experts who were invited for the seminar. The experts were senior representatives from sugar companies, distilleries, pulp and paper research institute, research institutes like TERI (The Energy & Resource Institute) and Winrock International, the Planning Commission, National Resource Centre for Cluster Development and NGO's like WWF who are actively working on sustainability projects.

Besides the external experts, the seminar was attended by the project partners from the Flemish Institute for Technological Research (ViTO), Belgium; Network for Preventive Environmental Management (NetPEM) Public Trust, Nagpur; CII-ITC Centre of Excellence for Sustainable Development (CESD) and Confederation of Indian Industry (CII), besides the International Council of Swedish Industry (NIR), Sweden

Mr. Kumra made a presentation on SINET Sustainability Framework in which he introduced the concept of sustainable industrial network, defining a micro-region and the key economic activity in the micro-region. As a background to the discussions on the model for on sustainable industrial network, he gave an overview of the various sustainability assessment models like:

- Environment Sustainability Assessment,
- Corporate Sustainability Assessment
- Product Sustainability Assessment
- Sustainability Assessment at Shell, Canada

Mr. Kumra also outlined the principle elements of sustainable industrial networking encompassing the social, economic, energy and environmental dimensions. These have been

specifically identified and defined keeping in view the applicability, circle of influence, and limitation of SMEs. On the issue of sustainability evaluation, he outlined the proposed draft SINET model that aims at evaluating overall sustainability of an industry network (product chain) by integrating sustainability aspects in:

- inputs (raw materials) & resources being used,
- the production system,
- outputs – waste, products and by-products;
- product system & design, and
- interaction between the industry and local community

This, he opined, would ultimately decided the sustainability of the micro-region. In conclusion, Mr. Kumra briefed the gathering about the various activities that are planned under the SINET initiative including organization of three working group seminars, compiling case studies on the textile, leather, health tourism and sugar sector, establishing a web portal on the SINET initiative, evolving a sustainability model and an international conference towards the concluding part of the initiative. This conference would look at engaging various national and international experts working on sustainability, to engage them in a policy dialogue that would help in evolving a sustainable industrial network, leading to enhanced economic productivity while maximizing the social benefits and also minimizing the environmental footprints of the industrial activity in the micro-region. The overall objective of these activities was to trigger a policy dialogue to promote industry cooperation (regional clusters, product chains, industrial estates) to enhance local regional sustainability.

The experts present briefly introduced themselves before the beginning of the technical presentations which included the industrial models from Europe and India being presented as case studies. A brief presentation was also made by one of the external experts from the World Wildlife Fund (WWF) on the sugar initiatives being carried out by them in the Godavari Basin in Maharashtra, India.

The first technical presentation was by Mr. Walther Van Aerschot from VITO Mol-Belgium, on European cases as examples of models of sustainable industrial co-operation. He explained in details the four European cases namely;

- The sustainable revitalisation project – Landskrona (Sweden)
- The park management model – Belgium and the Netherlands
- The industrial district model – Santa Croce sull'Arno (Italy)
- The industrial symbiosis model – Kalundborg (Denmark)

He highlighted that the case of Landskrona is an interesting example of an initiative aiming at revitalising an existing industrial area and he also provided financial statistics that proved the immense benefits of the exercise. Similarly he also explained the other three European case models with their outcomes and benefits. In conclusion, he summarized the lessons that one could learn from these models of industrial networking which were:

- Kalundborg (Denmark) is one of the few cases of industrial networking where sustainable industrial cooperation spontaneously arose. In most of the cases an intermediate organisation is needed to organise the cooperation between companies.
- Sustainable cooperation between companies is a workable concept with positive economic and environmental results.
- Dissemination of information on sustainable industrial cooperation is important.
- Financial incentives can accelerate the process of sustainable cooperation.
- The bottom-line of the study of the European cases is that sustainable industrial networking integrates industrial and ecological excellence in order to create economic opportunities and to improve environmental performances

The second presentation included case studies of industrial co-operation existing in India. Under this, four Indian case models such as:

- CII-CIDA Corporate Sustainability Management System (CSMS)
- The UNIDO Cluster model
- Waste Minimization Circle and
- Zoning Atlas model were presented

Dr. Aditi Halder of the CII-ITC CESD began the second technical presentation by putting forward the internationally accepted definition of sustainable development before the audience and appraised them of the evolution of the concept of corporate sustainability and how it has matured over the years. She also emphasized the importance of sustainability reporting as a key aspect of corporate sustainability and promoted the idea of GRI's G3 guidelines as the basic framework to produce such reporting. She then briefly explained the CII-CSMS initiatives, its achievements and concluded by highlighting the benefits of this initiative at the local and global level.

Dr. Rashmi Naidu of NetPEM reviewed three Indian models / initiatives of industrial cooperation and regional environmental sustainability – this presentation covered the basic objectives of the models, their implementation methodology, barriers encountered during the development of the models and the success stories emerging out of these models. The models that were discussed were:

- Waste Minimization Circle (WMC) initiative of the Ministry of Environment & Forests and the National Productivity Council, to improve the performance of the SME's through waste minimization practices
- UNIDO Cluster Models to improve the financial situation of the SME's through formation of industrial clusters and enhancing their competitiveness in the national and global markets and
- Zoning Atlas for the appropriate siting of industries to prevent environmental damages.

In conclusion, it was stated that institutionalization of sustainability practices was of paramount importance to have sustained and beneficial industrial networking.

Dr. Abhishek Bhatnagar of the WWF made a brief presentation on the initiatives being undertaken by the organization with special reference to the sugar sector, the emphasis being on the adoption of best management practices by the farmers with respect to utilization of water as sugarcane is a water intensive crop. It was agreed to continue to exchange information and cooperate with this initiative. It was agreed that Mr. Kumra will keep in touch with WWF for further discussing this initiative.

The post lunch session saw the experts engage in a brain storming session on sustainability issues facing the industries, specially the small and medium enterprises (SME's). This session was chaired by Mr. N.R. Krishnan, Former Secretary, Ministry of Environment and Forests) Senior Advisor, NetPEM Public Trust.

Mr. K.P. Nyati of CESD invited the experts to give their inputs on how to evolve the best sustainability model. It was only with these inputs, he said, that initiatives like SINET could advance the agenda of micro-regional, national and ultimately global sustainability.

During the course of discussions the grey areas/issues that were identified by the experts relating to sustainability of the industries were:

- Social indicators should be an integral part of the sustainability model
- Identification of issues, scope and extent (boundaries) of local stakeholder engagement
- Recognizing the boundaries of social responsibility of the industry – distinction between philanthropy and social responsibility – philanthropy is beyond social responsibility, but it doesn't mean that a company engaged in philanthropy has already taken care of its social responsibility. In most cases, philanthropy bypasses certain parts of social responsibility.
- Need for facilitators (Small Scale Industrial Institutions, Industrial Development Bank of India (IDBI) & other funding agencies). In each of the models presented, there were key facilitator that helped implementing these models, thus it is crucial for an institution / funding agency to own or put its weight behind such models
- Identification of the real drivers of sustainability (Industry, Government or Public demand)
- Provision of incentives for sustainable organizations
- Stringent legislations
- Innovation by the industry
- Issues of centralized utilities in an industrial complex / estate involving small and micro enterprises. This could be more efficient, effective, less costly, and could provide social benefits.

Ms. Amita Shah of the Gujarat Institute for Developmental Studies was of the opinion that in some cases stringent regulations can be a pre-requisite to sustainability but there should also be efforts towards engaging all the stakeholders of the micro-region for their inputs for achieving sustainability in the real sense of the word. Another point that she emphasized on was public – private partnership and identification of stakeholders at various levels. More than community participation, she thought that community discussions would serve the real purpose of sustainable industrial networking and it was here that the role of facilitating agencies like Small Scale Industrial Institutions, Industrial Development Bank of India (IDBI) & other funding agencies assumed importance, she said. Presently there was a big vacuum as there are no facilitators working towards the sustainability of the industries, especially the SME's.

Mr. Jai Uppal, a free lance consultant working in the areas of natural resources management, clean energy and climate change said that the emphasis should be on the symbiosis of the industrial units if there has to be sustainable networking among industries in the micro-region. He also gave an example of bio-diesel units operating in Germany in an industrial area where there were no boundaries. They had common utility service / infrastructure which maximized resource utilization and optimized costs and investments. This example was a unique example of integration of production and services, according to him. He concluded by saying that sustainable industrial networking should be by design and not by accident.

On the issue of yardstick to rank the industries on their sustainability performance, Mr. K.P. Nyati of CESD opined that at the moment there was no standard yardstick with which the companies could be judged for their sustainability, but Mr. N.R. Krishnan said that probably employment could be a good yardstick to begin with as it covered the social and economic issues associated with sustainability. Mr. Kumra informed that the sustainability of industrial activity should be compared within the context of its own sector – thus there is a need to evaluate the macro sustainability of the sector / product system and then place the company / specific unit on this yard stick.

The concluding session of the seminar saw discussions on the sustainability issues relating to the sugar sector network and the issues that were identified by the experts were:

- Wide fluctuations in the sugar production (better pest control, role of monsoons/irrigation)
- Need to look at sustainable farming systems
- Sustainable Livelihood
- Use of Bagasse as fuel
- Efficiency of the anaerobic digesters
- Use of cleaner technology & alternative treatment methods

- Issue of the Khandsari industry

Dr. Malini Balakrishnan of The Energy & Resources Institute (TERI), a non-governmental research organization working in the fields of energy, environment, and sustainable development, began by saying that the discussions held thus far were an immense learning experience for her.

She said the sugar sector is unique compared to the other industries, given the enormous control that the Indian government wielded over it. While on one hand the price of sugar cane has risen almost five times in the last decade the price of sugar as a commodity has not changed much, sugar being an essential commodity. Thus she opined that the sugar industry will have to innovate if it has to move ahead on the path of sustainability. The industry will have to look at issue like its wastewater treatment to a point that the water can be recycled back into the sugar production system, substitution of molasses as raw material for alcohol production, use of bagasse as fuel and the generation of fly-ash due to the burning of bagasse in the boilers. She pointed out that the fly-ash thus generated has appreciable char content which could be used to make specialty products like activated carbon. The oxides in the fly-ash could be used for making ceramic filters, which are presently being imported for use in high temperature applications. It is by such innovations she said that the sugar industry could become competitive and move ahead on the path of sustainability.

Dr. Malini also drew the attention of the participants of the seminar to the issue of Khandsari (a product similar to jaggery) industry operating very close to the sugar mills. These units, many times operating from the backyards of the farmers fields, lead to a substantial part of the sugar cane being diverted from the sugar mills for producing Khandsari (having favorable regulations – concerning price and excise) which has its own market demands, thus competing with the sugar industry. Whereas sugar is a highly regulated commodity, the same could not be said for Khandsari and this issue the experts felt should be addressed in evaluating the sustainability of the sugar sector network.

The experts also raised the issue of the efficiency of bio-digesters used for the production of bio-gas that is used as fuel in the sugar mills. The research organizations like TERI were called upon to address this issue which could prove to be of immense help in addressing the energy needs of the sugar industry. The enhanced bio-gas generation would help to meet the energy needs of the sugar industry and the surplus energy generated by using bagasse as the boiler feed could be supplied to the grid, enhancing its capacity to provide energy to the local population residing in the micro-region.

Sugarcane being a cyclical crop and the production season ranging from four to five months, the question of livelihood of the workforce employed in this sector in non-operative period also figured in the discussions and it was here that the concept of sustainable livelihood came up.

Also the group agreed that it was essential to identify the boundary up to which an industry should go in fulfilling its social responsibilities, because exceeding the boundary would lead to the company's efforts becoming philanthropic. Mr. Kumra gave a case in point where a particular company spent lakhs of rupees annually as part of its social responsibility exercise, but when they sat down to fill the sustainability report they were at a loss to identify the areas where they could highlight their contribution. Therefore identification of the areas of intervention was important it was felt. Also defining the sector specific sustainability indicators could give a fairly good outline for making efforts and contribution by the industry to sustainability. This will help industry being pragmatic and also utilizing the resources in an effective manner for the cause of sustainability.

It might be also important to address the issues of nuisance value using sustainability arguments by certain agencies that negatively affect the local sustainability – delaying certain projects / developmental initiatives. Same might be true for social responsibility when discussing with local stakeholders. Certain stakeholders / opinion leaders might divert the discussions towards issues that go beyond the social responsibility scope of the industry. These issues were not discussed at length but it might be important to include this in future discussions.

In conclusion, it was unanimously agreed upon that discussion with all the affected stakeholders, incentives to the industry for adopting sustainability practices and engaging the policy makers into such initiatives are vital pre-conditions for a sustainable industrial network to evolve in any micro-region.