What mining industry could learn from the past environmental struggles of the Finnish forest industry?

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Introduction

Good practices for the mining industry, such as those conducted by the Finnish forest industry, would be:

1) developing the co-working with the authorities and seeing strict emission permissions and management systems as beneficial for the industry,

2) increasingly recognising stakeholders and developing communication with them,

3) take advantage of the cooperation within the mining industry sector especially in research and communication, and

4) developing the corporate culture so that social responsibility is an integral part of the production and business making.

Finnish mining industry is currently facing a challenge to rebuild the industrial culture after about an era of 20 years when only few mine has been active. In the late 80’s the Finnish government defined the state level industrial policy not supporting national and state-owned mining industry in Finland. Most of the Finnish mines were closed, education system was not encouraged to support mining industry and so forth. As the global mineral scarcity started to be a driver the Finnish mining industry begun to recover at the middle of first decade of this millennium. During this rebuilding process the mining industry has increasingly faced negative publicity and the social license to operate (SLO) has become a severe question. Here, the challenges faced currently by the mining industry are reflected upon another resource extractive industry, the forest industry.

Forest industry has been the most important export business in Finland since the 16th hundred. First tar, then timber and after the Second World War pulp and paper production have been an industry shaping the Finnish society. “Finland is making welfare and business from the forest” mythology has been powerful redirector of the Finnish political decision making (Donner-Amnell 1991). Since 1920s- and 30s Finland has been clearly “a forest sector society”; 85-95 % of the export business was made by forest industry (Massa 1994). Forest industry was seen as a national benefit and forest researchers were interpreters of this benefit (ibid.). Until now “the social licence to operate” of the forest industry has been manifested by affordable energy prices and forest raw material availability supported politically by the Finnish society (Niskanen et al. 2008, Donner-Amnell et al. 2011).

Behind the success of the national economic development, the forest industry has however also produced environmental conflicts. Donner-Amnell (1991) stated that “the forest industry is the biggest environmental problem in Finland”. This Brief introduces the critical points of how the forest industry answered to the responsibility and sustainability needs of the customers and environmental authorities starting from the 60’s, and what lessons these experiences could deliver to development of the SLO issues in mining industry. This work is a part of TEKES Green Mining programme financed SAM (Sustainable and Acceptable Mining Industry) research project. One of the aims of the SAM research project is to introduce tools to achieve the social licence to operate in mining industry.

Most of the mining industry companies currently acting in Finland are foreign companies. This creates challenges in conducting the same practices as Finnish forest industry companies have done. Cooperation between the industry partners for instance may be challenging. Also the customer in the mining industry is far and dispersed, and the customer demand on environmental issues is not that clear as it is in the forest industry.
The authorities and the environmental question
Forest companies managed the environmental question in the 1980’s by fulfilling the official requirements set by newly established environmental authorities (Mäntylä 1998). The environmental strategy was hence defensive (Donner-Amnell 1995). A well working communication between companies and the authorities was recognised, but rising stakeholder interest towards environmental effects was ignored at the beginning. Especially active local environmental authorities were important actors who identified and revealed the environmental problems caused by the forest industry (Kortelainen 2000).

Water Act introduced in 1963 forced companies to start to develop technologies to clean their waste water (Wessman 2007). Due to this competent authority work companies were forced to do remarkable investments for environmental protection. In the long run this proved to be beneficial for the companies because their environmental image was improved and at the same time in the 80’s, the customers started to ask for environmental protection from the companies. Especially the strict water emission permits were effective (Lahti-Nuuttila 2000). During the 80’s, attention was also put to the accidental releases caused by the forest industry. Accordingly specific environmental risk analysis in order to avoid such releases started to be ordered by the authorities (Wessberg 2007).

Air emissions like sulphur dioxides, nitrogen oxides and later carbon dioxide came into discussion during the 1990’s. Also discussion on recycling and forest management was raised up. Methodology for life-cycle assessment (LCA) was developed earlier at the beginning of 90’s and forest industry was the forerunner of developing and using LCA methodology. During the 2000’s environmental discussion was focused especially on product LCA, sustainability indicators, and carbon footprint, role of resource and material use and energy efficiency. The EU context brought BAT/BREF documents into the picture offering a common platform for the information tool of the best available technologies (Meristö et al. 2006). In these documents the best economically viable available technologies are introduced. The first BAT documents were published in the 2000.
In the 1990’s the environmental question became a continuous issue; it was realised that the company must be awake at all times and ready to react, preferably proactively, as new concerns were raised by the public.

Considering the stakeholders
The change process was in all forest industry plants in one way or the other a consequence of some kind of a conflict between the company and the stakeholders. In particular, different kinds of interest groups and natural protection activist groups played a big role in the change (see e.g. Kortelainen 1994/2000, Lehtinen ja Rannikko 1994, Sankari 1994, Lehtola 1994). An active interaction and communication with customers started in the 1990’s (Mäntylä 1998).

Customers, especially foreign wholesale firms, printing houses and publishers demanded the environmental performance from the forest companies (Kortelainen 2000, Rytteri 2002). Because these customers were foreign the local activities were not sufficient anymore, but environmental performance became an image issue (Rytteri 2002). In order to gain positive environmental image, it was important not just to create and sustain internal environmental management systems and perform well continuously, but also to tell to the stakeholders how well the company improves the environmental performance continuously (Kuisma 2004). Forest resources used started to be certified in order to show that wood resource is produced in a sustainable way (PEFC and FSC). Global sustainability demands have also been tackled with the help of International Chamber of Commerce’s sustainability charter or Dow Jones Sustainability indexes. Companies started to organise also special communication events where they invited authorities to negotiate the company strategies and future production views (Kettunen 2002), as well as inform and discuss current issues with the local citizens.

The forests industry actors have emphasised the meaning of “fact-based knowledge” in stakeholder communication. All kinds of indicators and certificates are expressing this “fact-based knowledge”. Donner-Amnell (1995) has criticised this “fact communication strategy” to underestimate the knowledge of stakeholders; it creates an impression as environmental problems are just misunderstandings of the stakeholders, as experiences of environmental problems are not real. This notion underlines the idea of expert knowledge, whose knowledge is the right knowledge?
Cooperation between the forest industry actors

A perceptible occurrence in Finnish forest industry was that they integrated their resources into a common environmental reporting and a common research organisation: KCL The Finnish Pulp and Paper Research Institute.
The KCL the Finnish Pulp and Paper Research Institute was established in 1916 (KCL 1996). In KCL the forest industry developed among other technologies also environmental technology to manage the emissions, especially during the 80’s. Without this active touch in technology development it would have not been possible to reduce emissions so efficiently. In the beginning of 2000 this development work was labelled as sustainable development, focusing also to sustainability indicator development and product LCA. The development work especially in analytics was pioneering in KCL. KCL also prepared many potential future scenarios and how the forest industry should be prepared in order to manage in the changing operational environment. However not everybody is convinced of the innovativeness of these scenarios; e.g. Donner-Amnell (1991, 1995, 2008, 2011) sees that the Finnish forest industry has not been able to renew its strategies very effectively.

Another meaningful effort in the Finnish forest industry was the creation of a common environmental reporting. In the 1987, all the forest industry units collected their environmental performance information into a one report (Kettunen 2002, Kuisma 2004). This first try was continuing in 1990 when the Forest Industry Federation started to collect information concerning the environmental management systems and environmental protection investments from all the single forest industry plants and published this information (Kuisma 2004) firstly in paper versions and currently in the internet. This practice is a useful and important tool in the communication with the stakeholders. It is a way to show the improved environmental performance of the forest industry and to make continuous benchmark between the mills and companies.

Cooperation has also been done across the borders. Finnish pulp and paper industry has together with leading global pulp and paper manufacturers and industry associations (CEPI) co-operated e.g. to develop a voluntary, unified declaration scheme for presenting environmental product information, that is called as a Paper Profile. Companies follow it closely and have found it beneficial to proactively take part in the development work of e.g. water footprint and carbon footprint to bring out the Nordic and industrial views.

Cooperation with Finnish consultants, namely Ekono and Pöyry, has also been of substantial benefit to the success of the Finnish forest industry. Mentionable is also the cooperation between the forest industry and local water protection associations, which have had a meaningful role in collecting stakeholders together to discuss problems and challenges.
Carelessness was changed into social responsibility by environmental technology but also by educating and organising the staff.

In our days the environmental issues constitute a megatrend which is routinely considered in all investments and other activities in the forest industry among other trends (Meristö et al. 2006). Environmental management is a question of corporate image and it is considered as a profitable company action also in market creation (Kortelainen 2000). The meaning of the factory work was finding new respect in emphasising the professional skills in environmental technology and emission control (Kortelainen 1994).

A basic rule was that the environmental technology was not developed in the company, but the company processes were developed inside the company (Kettunen 2002). Such processes included for instance the process changes in order to improve environmental safety (Kortelainen 2000). Environmental management systems started to emerge in the 1990’s, and companies were hiring special environmental management staff (Mäntylä 1998). Special management committees were built, e.g. a water management committee in UPM to take care of the waste water management issues (Tuuri 1999).
REFERENCES


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