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Jørgensen, Michael Søgaard; Milanez, Bruno; Porto, Marcelo Firpo

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# **Analysis of Cheminova CSR practice**

*Working paper by*

*Michael Søgaard Jørgensen, DTU Management Engineering, Technical University of Denmark*

*Bruno Milanez, National School of Public Health – Oswaldo Cruz Foundation (ENSP/FIOCRUZ)*

*Marcelo Firpo Porto, National School of Public Health – Oswaldo Cruz Foundation (ENSP/FIOCRUZ)*

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## **1. Analytical approach**

This working paper is part of a case study about the international environmental and social performance of the multinational Danish pesticide manufacturing and marketing company Cheminova. In the paper the practice of Cheminova is described and characterised based on its CSR reports from 2007 and 2008, covering the years 2006 and 2007 and the annual report covering 2007 of the mother company of Cheminova, Auriga Industries A/S. The following three analytical perspectives are applied

- Within a conventional agricultural strategy, what is efficiency and effectiveness of Cheminova's initiatives
- Within an environmental and social sustainable agricultural strategy, what are known experiences with other concepts, which fulfil the objectives, which Cheminova claims to care about
- Within an equal opportunity perspective: whether Cheminova practices a "double standard strategy" with higher environmental and social protection in industrialised countries than in developing countries

## **2. Organisation of Cheminova**

### **Ownership**

Cheminova is a public limited company owned by Auriga Industries A/S. Auriga is quoted on the Copenhagen Stock Exchange with the Aarhus University Research Foundation as the largest

shareholder. The foundation owns all class A shares, approximately 40 per cent of the share capital and holds approximately 84 per cent of the voting rights (Cheminova, 2007, p.8).

Cheminova has production facilities in Denmark and India and has sales offices in 20 countries. Cheminova has approx. 1,600 employees – a number that has been approximately the same the last five years (Cheminova, 2008, p.10). Of the 1600 employees, 800 are employed in Denmark and 800 in subsidiaries and representative offices outside Denmark (Cheminova, 2008, p.9). The map shows the geographical distribution of Cheminova facilities in 2008 (Cheminova, 2008, p.10).



### **3. The Cheminova business strategy**

Cheminova's main activity is development, production and marketing of pesticides. The company sees itself as "a leading supplier of insecticides and an important supplier of herbicides and fungicides" (Auriga, 2008, p.18).

Cheminova describe its objective as "to be the leading innovative global supplier of generic products within the agrochemical industry" (Cheminova, 2008, p.9). By the term "generic products" are meant active ingredient which are no longer protected by patents. The creation of value is expected to be achieved through optimisation and development of the company's five key competences: "To identify, develop, register, manufacture and market known plant protection products better than any other company in the industry" (Cheminova, 2007, p.8). In the report covering 2007 the five core competences include an objective of being cheaper than the competitors (Cheminova, 2008, p.10).

Cheminova business strategy is based on different types of pesticides, which by Cheminova is called "plant protection products". The most important are (Auriga, 2008, p.18):

- Insecticides based on the active ingredients malathion, chlorpyrifos, dimethoate, methyl parathion, acephate, phosalone, gamma-cyhalothrin, acrinathrin, imidacloprid and abamectin.
- 
- Herbicides based on the active ingredients glyphosate, metsulfuron, tribenuron, thifensulfuron, nicosulfuron, diflufenican, fenoxaprop-p and clodinafop.
- 
- Fungicides based on the active ingredients flutriafol, fluazinam, tebuconazole, epoxiconazole, fenpropidin and fosethyl-al.

The organophosphorous insecticides account for a declining share of sales. In 2007 sales thus accounted for 21 per cent of total revenue (Auriga, 2008, p.19).

Cheminova it recent development as a strong internationalisation with increasing focus on sales via own subsidiaries:

“Over the past ten years, Cheminova has undergone a strong internationalisation process which has meant that the company has developed from previously being a production company in Denmark, manufacturing active ingredients and chemical intermediates sold for further processing, to now also having production facilities in India and direct contact to the customers/end-users via its own subsidiaries and representative offices. Cheminova’s sales are increasingly handled via its own subsidiaries. In 1996, the company had subsidiaries in seven countries, representing 47 per cent of plant protection product sales, whereas 84 per cent of sales were handled by 16 subsidiaries in 2006” (Cheminova, 2007, p.9-10). This implies that Cheminova today is handling around 85% of its sales via its own companies, which are present at the local markets. The development of the increasing presence at the local markets nearer to the final customer has in some cases taken place through acquisition of existing companies, like the purchase of 50% of the shares in the German company Stähler, which gave access to the German, Austrian and Swiss markets through the existing sales network of that company (Auriga, 2008, p.19).

Cheminova presents its kind of innovation as (Cheminova, 2008, p.20)

- completely new production processes based on innovative chemistry from the outset
- in-depth know-how about the latest chemistry

According to the report Cheminova practices increasing co-operation in relation to product and process development: “Sometimes, chemical development work takes place in cooperation with external laboratories. Joint development activities can comprise anything from purchasing already-developed products or processes to the joint development activities where Cheminova, in collaboration with the external laboratory, optimises the process. Development in cooperation with external laboratories is taking place to an increasing extent, and in future is expected to demand more efforts on the part of Cheminova’s development department (Cheminova, 2008, p.20).

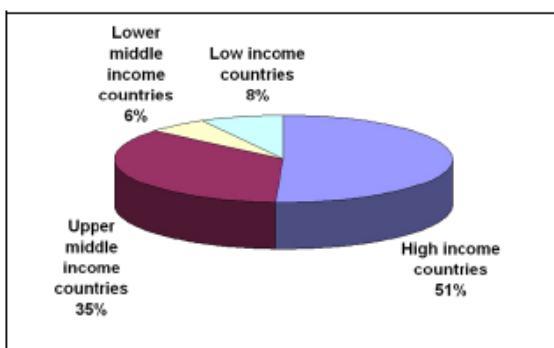
According the Cheminova business plan for the 2008-2010 period revenue and earnings must be increased through the introduction of new products, through improvements in production and all other functions and through active participation in the expected structural rationalisation process in the industry (Cheminova, 2008, p.9). In relation to the development of new formulations efforts are made to produce patentable formulations (Cheminova, 2008, p.21).

Cheminova describes the focus in the development of new formulations is on “more effective, safer and more stable formulations with approved accessory agents” (Cheminova, 2008, p.21).

Although it is claimed that Cheminova increasingly does not use organic solvents as carrying agent the number of formulations with organic solvents are higher in 2007 than in 1998. However, it looks like the recent innovations to a less extent use organic solvents as the new formulations, expected to be on the market in 2008, “are dry formulations in the form of water-dispersible granules, and the liquid products are either water-based or based on plant oils. Traditional organic solvents are only used for a single product. However, this product will be launched at a later date as a water-based microcapsule formulation” (Cheminova, 2008, p. 22).

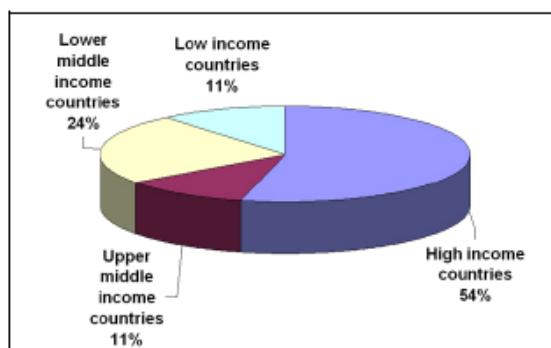
## Distribution of sales

According to the Cheminova CSR report 2007 the sales are distributed among different types of countries in terms of income like shown in the figures underneath from Cheminova’s CSR report covering 2007 (Cheminova, 2008, p.11).



*Sales broken down by rich and poor countries 2007*

*2007: Sales broken down by rich and poor countries (breakdown according to the World Bank’s categories of gross national income per capita: Low income USD 905 or less p.a.; lower middle income USD 906-3,595 p.a., higher middle income USD 3,596 - 11,115 p.a., higher income USD 11,116 or more p.a.).*



*Sales broken down by rich and poor countries 2006*

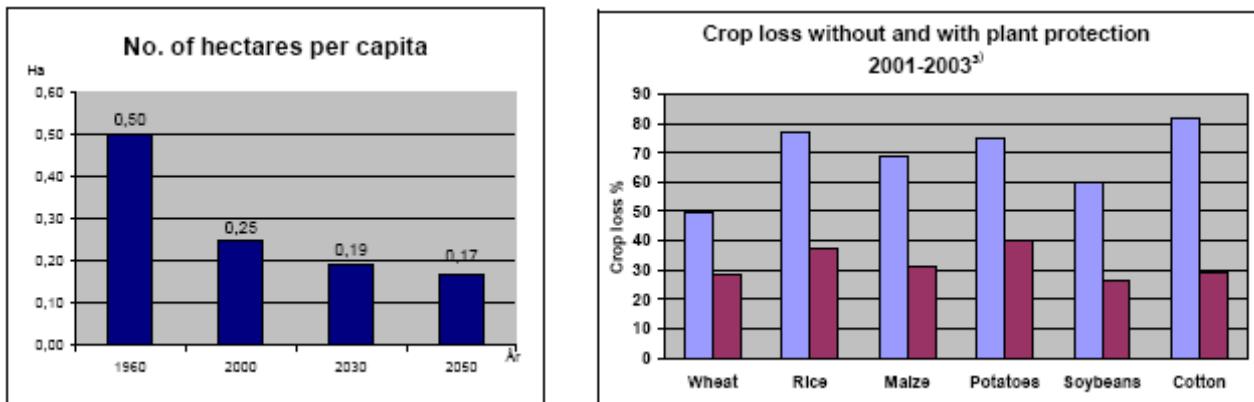
*2006: Sales broken down by rich and poor countries (breakdown according to the World Bank’s categories of gross national income per capita: Low income USD 875 or less p.a.; lower middle income USD 876-3,465 p.a.; higher middle income USD 3,466-10,726 p.a.; higher income USD 11,116 or more p.a.).*

## Justification of business strategy

Cheminova seeks to justify its business strategy by making references to global problems with starvation and transmitted diseases, when writing: “In Denmark, we do not suffer from starvation or diseases such as malaria - and this makes it difficult for people to understand that, elsewhere, it may be necessary to resort to extreme measures in order to ensure food on the table” (Cheminova, 2007, p.3).

Cheminova refers also to a need for a future increase in agricultural efficiency, which is said to become bigger due to an increasing world population and an increasing need for land for biofuel: “Only efficient agricultural production with optimum utilisation of all modern methods can ensure the yield increases required. The problem will become even more pronounced as large areas are expected to be redistributed from food production to the production of ethanol for biofuel” (Cheminova, 2007, p.6). Cheminova claims indirectly that agricultural land is not “good” for the biodiversity of the nature and that an increased agricultural efficiency will save more natural eco-system to be turned into agricultural land (Cheminova, 2007, p.6).

The report about 2006 includes the following two figures, showing a decreasing number of hectares per capita and crop loss with and without plant protection. Pesticides are not directly mentioned.



Furthermore, Cheminova refers to the Millennium Development Goals (MDG) concerning hunger as an argument for the importance of fighting hunger. The mission of Cheminova is presented as "to control unwanted insects, plants and fungi in order to secure adequate food and fibre production and to improve the living conditions of the world's population" (Cheminova, 2007, p.8).

### Relation to genetic modification technology

Cheminova does not consider itself as active within gene technology, but are, however, manufacturing and marketing plant protection products for use in GMO crops (Cheminova, 2007, p.8).

## 4. The background of CSR reporting

Cheminova made its first CSR report in 2007 – covering the year 2006. In the first report the background of start reporting is described: "Based on a public debate in 2006 over a number of environmental issues relating to Cheminova's business activities, it was decided to start CSR reporting" (Cheminova, 2007, p.9). Cheminova finds that "opinion leaders and citizens lack information about how responsible Cheminova is" and sees the strategy to be to provide more information (Cheminova, 2007, p.9).

This background to the CSR reporting is also seen in the following paragraph from the first CSR report: "We believe that most people with a good knowledge of Cheminova perceive the company as a competent global player which performs its activities with a considerable sense of responsibility - a concern that is reflected in all the company's activities. The debate in the Danish media over Cheminova's sale of hazardous chemicals has demonstrated, however, that there are opinion leaders as well as other citizens in Denmark who unfortunately do not share that perception (Cheminova, 2007, p.3).

However, Cheminova at the same time it is claimed that the reporting is "a natural next step" following what the company "has previously implemented" (Cheminova, 2007, p.9). The CSR report is seen as a management tool and an external communication tool, including attracting potential employees (Cheminova, 2008, p.3).

The CSR report is audited by PriceWaterhouse, who writes this about the assurance, which can be obtained from their auditing:

“The obtained assurance is limited as we have not performed a comprehensive review. Our work has - based on assessment of materiality and risk - included inquiries concerning goal attainment, including obtaining documented confirmations regarding goal attainment from the local management of the Group’s sales companies, interviews with selected key managerial employees responsible for the goal attainment and review of selected documentation. We have made inspection visits to the production companies in India and Denmark as well as to the sales company in Brazil” (Cheminova, 2008, p.5).

## **5. *Elements in Cheminova’s CSR strategy***

### **Business principles**

Cheminova has developed a code of business principles, which have been signed by the different directors, which can be seen as an integration of these concerns into the management. The need for such principles is seen as a consequence of the increasing internationalisation of Cheminova:

“Such internationalisation naturally poses a broad range of challenges for Cheminova in relation to mission, objectives and values. Cheminova wants to ensure that the way in which the company is operated is in full compliance with international conventions, local legislation and the management philosophy and values which are promoted in the entire group. Cheminova therefore now takes the opportunity, in connection with the first CSR reporting, to summarise previously formulated policies and guidelines in the code of business principles set out below” (Cheminova, 2007, p.10).

The increased role in customer sales is said to imply that “Cheminova feels increasingly responsible for contributing to reducing the risk involved in using the products” (Cheminova, 2007, p.13).

Two of the business principles focus on legal compliance and on environmental protection (Cheminova, 2007, p.10):

- Legal compliance: “to comply with the laws and regulations of the countries” in which Cheminova operates
- Environmental protection: “Environmental impacts are an important factor in connection with the manufacture and sale of chemicals. Responsible behaviour in this area is highly important to Cheminova, which entails that the company strives for continuous improvements in the area”

Cheminova is aware about the differences in legislative demands in different countries: “All Cheminova’s products are approved according to the applicable rules in the countries in which they are marketed. There are considerable similarities between the type of data required, but there are great differences in the scope and quality of the investigations required in order to obtain approvals in the individual countries” (Cheminova, 2007, p.13).

### **Safety of chemicals**

Cheminova believes that “task of reaching an acceptable risk level for the users is the responsibility of the local authorities, the individual farmers and the product suppliers and can therefore, for obvious reasons, not be solved by any one company” (Cheminova, 2007, p.18). However, Cheminova claims “to have decided to make targeted efforts to reduce the risk involved in connection with the use of the company’s products” (Cheminova, 2007, p.18).

Cheminova characterises its activities around the use of products as “product stewardship” and describes its strategy as “to focus in particular on stewardship activities with the most toxic products that, according to WHO’s classification system, belong to class Ia and Ib” (Cheminova 2007, p. 19). The areas in which Cheminova has chosen to focus its efforts are described as:

- Communication of information on the correct use and handling of the products,
- Precise and informative labelling,
- Development and marketing of less toxic formulations,
- Use of appropriate packaging materials
- Phase-out of class I products in a number of countries.

The underlying principle for what Cheminova calls its stewardship of plant protection products is risk reduction. The cornerstones are said to be (Cheminova, 2008, p.13):

- Legislation:
  - o Focus on the national legislation in all the countries where Cheminova’s products are sold.
  - o Cheminova only markets products for which marketing permission has been obtained in accordance with local rules as well as the rules outlined in the Rotterdam convention concerning “Prior Informed Consent”, which are also contained in EU legislation and which regulate the export of specific chemical substances.
- FAO’s Code of Conduct :
  - o In 2007, the FAO’s Code of Conduct was formally implemented in all the subsidiaries’ management principles. The FAO’s Code of Conduct specifies standards which purport to reduce the risks involved in distributing and using plant protection products.
- Phase-out of the most toxic substances:
  - o Cheminova’s phase-out plan relates to ready-to-use products which fall under the WHO classes Ia and Ib, i.e. products which are classified as “extremely hazardous” and “highly hazardous”, respectively.

Cheminova furthermore claims to be the only of the few companies that follows FAO’s code of conduct for hazardous properties of chemicals: “Cheminova is the only company that markets a malathion product which complies with FAO’s specifications” (Cheminova, 2007, p.7).

Cheminova explains that it has chosen to limit its sales of methyl parathion in its most toxic form (class I) to eight countries whereas the product is registered in more than thirty countries (Cheminova, 2007, p.14).

Cheminova presents in the two reports its plan for phasing out of Class I products, based on ready-to-use products – not the active ingredient itself. The table in the report for 2007 is shown underneath (Cheminova, 2008, p. 13). Compared to the report shown in the report for 2006 the table does not show those applications of class I products which are not phased out. The 2006-list shows that class I products still will be sold in among other countries USA and Australia. Furthermore that class II formulations of class I active ingredients will not be phased out (Cheminova, 2007, p.20).

Cheminova's phase-out plan		
Country	Product	Phase-out year
Mexico	Methyl parathion EC (class I)	2009
	Methomyl SP (class I)	2007
	Methamidophos EC (class I)	2009
Brazil	Methyl parathion EC (class I)	2010
	Methamidophos EC (class I)	2009
Colombia	Methyl parathion EC (class I)	2009
	Monocrotophos SL (class I)	2009
	Methamidophos EC (class I)	2009
	Carbofuran SC (class I)	2007
Taiwan	Methyl parathion EC (class I)	2007
Cuba	Methyl parathion EC (class I)	2009
Argentina	Methamidophos EC (class I)	2009
India	Monocrotophos SL (class I)	2009
	DDVP EC (class I)	2010
	Phorate granulate (class I)	2009

The development of less hazardous products focuses on microcapsulation of the active ingredient by a component which is water soluble, whereby the formulation is said to become less toxic (Cheminova, 2007, p.17) although the principles behind a reduced toxicity is not explained in the CSR report.

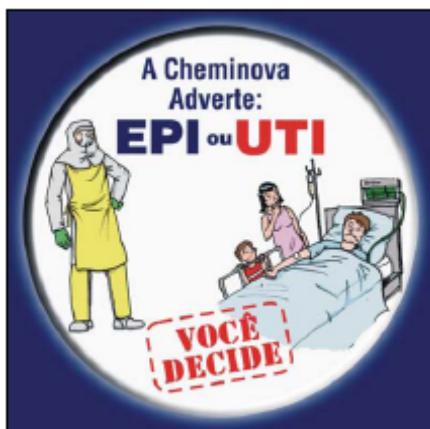
According to the patent behind the encapsulation technique – giving microcapsules comprised of methyl parathion or ethyl parathion contained within an encapsulating wall or skin of cross-linked polyamide-polyurea - the toxicity of encapsulated methyl parathion is only one-tenth that of the unencapsulated methyl parathion, while the toxicity of encapsulated ethyl parathion to mammals is only one-hundredth that of the unencapsulated ethyl parathion composition (Microencapsulated methyl and ethyl parathion...,1976). It is said in the patent to be a surprising aspect of this invention that although the encapsulated parathions are significantly less toxic to mammals than the unencapsulated parathions, the encapsulated parathions are more toxic to insects than the unencapsulated material, showing a more effective kill at smaller concentrations, in addition to killing insects for an extended period of time in the field and seems to give a more effective insect control than the unencapsulated material at equivalent concentrations.

The use of parathion compositions also presents a serious pollution problem, as well as a safety hazard to field workers since repeated applications with the fast-degrading pesticides were necessary, thereby increasing the danger to the field workers caused by the insecticides' high mammalian toxicity by either oral ingestion or skin contact. These hazards are claimed to be substantially eliminated by the encapsulation technique because of the need for fewer applications of a less concentrated insecticide and the reduced mammalian toxicity of the encapsulated product. It is also claimed that the encapsulated parathions do not filter into the soil in contrast to the unencapsulated insecticides. The encapsulated parathions may therefore not present the same hazard to deep soil inhabitants, such as earthworms, and are not washed through the soil to contaminate streams, rivers and lakes.

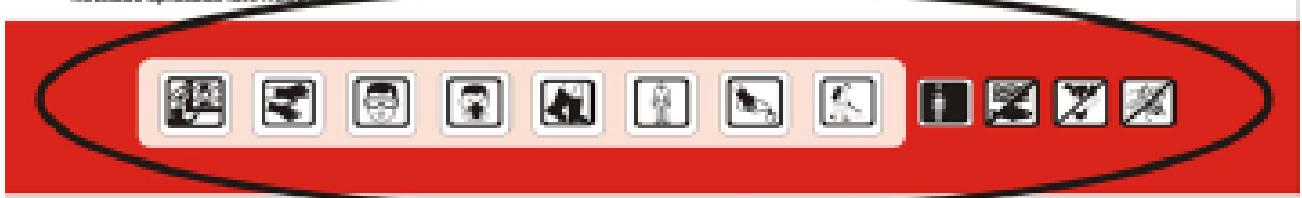
Another major disadvantage of unmodified, unencapsulated methyl and ethyl parathions is their limited use capability because of their chemical phytotoxicity to various food crops. In contrast, the encapsulated parathions is claimed to be able to be used to protect crops from insect infestation without causing damage to the plants (Microencapsulated methyl and ethyl parathion..., 1976).

Cheminova claims to practice an environmental management with respect to Class I products where the focus increasingly is on so-called professional farmers: "Class I products based on methyl parathion and methamidophos will not be sold in small containers, and the sale will be limited to professional farmers. In states in which irresponsible use of the products is prevalent, the product approvals will be revoked, and the use in these states will be removed from Cheminova's labels" (Cheminova, 2007, p.21).

In order to support the development if a more safe use of the products Cheminova has organised information activities based on information meetings for farmers and other interested in Brazil in connection to agricultural fairs and “field days”. One element in these activities is a video about the use of pesticides. Cheminova describes this activity as “training in the correct use of the products as well as the reduction of risks from the point of view of occupational health and safety will be intensified in connection with Cheminova’s sales campaign” (Cheminova, 2008, p.21). The focus in the activities is on what Cheminova calls “user safety”. The approach makes it a personal choice of the user whether the user will use the products in a safe way and that user safety can be obtained through the use of personal protective gear. The cartoon shown underneath shows the personal approach in the campaign (Cheminova, 2008, p. 16) where the text can be translated as “protective equipment or hospital – you decide”.



• (a) Caso de Emergência, comunicação com o 192 (0800-192192) entre 08h00 e 18h00h (exceto 24 horas). O envio de e-mail é feito entre 08h00 e 18h00h.



## Pictograms

## Product chain management

Cheminova has a rather complex product chain structure where it is not easy to get an overview of the chain of actors from production to sale. This was seen in the public debate about the use of methyl parathion which the Danish newspaper Politiken described in articles in 2006 (Thomsen, 2006).

Although Cheminova claims not to sell Class I products they sold in 2006 a Class I product of another company. In the same articles it was described how Cheminova claimed only to produce Class I ingredients, which they sold for other companies. However, it turned out that Bayer at that time had already stopped selling methyl parathion (Thomsen, 2006).

In the report covering 2006 it is described how Cheminova aims at restricting the sales of the active ingredient methyl parathion to companies that manufacture and sell methyl parathion-based class II products such as low-concentrate powder formulations (Cheminova, 2007, p.21).

Cheminova claims that its environmental and social responsibility also extends to its suppliers (Cheminova, 2007, p.32). The elements in the supply chain management are described as (Cheminova, 2008, p.33):

- Supplier code which the supplies need to accept and confirm compliance
- A number of audits at suppliers
- Training of purchase responsible

In 2006, Cheminova had around business with approximately 900 suppliers of production materials (raw materials, fine chemicals, plant protection products and packaging materials). These suppliers include companies, which supply Cheminova with supplementary services for the production in the form of contract production and contract packaging (Cheminova, 2007, p.32).

As an example of supplier management the report for 2006 refers that Cheminova at the beginning of 2005, established a policy for external companies that manufacture and package end-use products under subcontracts (Cheminova, 2007, p.32).

## 6. Assessment of Cheminova's CSR practice

The Cheminova CSR reports can be characterised as based on

- very overall (environmental) targets (although targets normally should be much more detailed and concrete according to ISO14001)
- Responsible Care as a “soft” standard without mandatory auditing
- ISO14001 and OHSAS18001 applied at the Danish production facility

The combination of a big number of suppliers, a supply chain management concept based on communication of Cheminova's supplier code and the supplier's accept of the need for compliance, and a limited number of audits and screenings of suppliers may give a rather limited insight into the actual practice of the most of Cheminova's suppliers.

## Approach to risks

Based on the descriptions in the two reports the script (the understanding) for use of pesticides, which Cheminova bases its business strategy on, can be characterised by the assumption that the following elements play a role in a safe use of pesticides:

- the active ingredient
- the formulation

- the packaging
- the labelling
- the equipment used for mixing, spraying etc.
- the gear used by the user
- the knowledge of the user
- the water quality in the area where a product is mixed
- the local climate

Cheminova has focus on the small amounts in terms of the weight of the necessary active ingredients (Cheminova, 2008, p.23). This understanding of risk is not in line with focus on number of sprayings, which recently has been applied in Denmark. A reduction in the number of sprayings in itself is, however, not ensuring low impact, if the active ingredient e.g. is very persistent.

## **Transnational aspects of environmental management**

Cheminova describes the principle of its transnational environmental strategy as “to comply with the laws and regulations of the countries” in which Cheminova operates (Cheminova, 2007, p.10). This kind of strategy is in the literature characterised as “international compliance” (Hansen, 1999).

One aspect of transitional environmental management is so-called “double standards”, understood as different levels of environmental management in different social contexts, where differences in regulatory intensity between countries are exploited (see e.g. Hansen (1999) citing Castleman). The two CSR-reports show the following aspects of double standards:

- The differences among countries in the phasing out of pesticides in terms of products and timing
- The difference in availability of the CSR report in local languages
- The difference in the management systems used in Denmark and India
- The sale of pesticides outside Denmark, which are not allowed to be used in Denmark

### Practice in Brazil

The principle of international compliance (Hansen, 1999) is not fulfilled by Cheminova since Cheminova in 2008 is involved in attempts to prevent the Brazilian federal government from re-evaluating one of Cheminova’s pesticides – methyl parathion (ANVISA, 2008). One of the companies’ arguments against the re-evaluation is that methyl parathion is not on the Rotterdam convention’s PIC list. However, Cheminova is itself referring to the PIC convention when explaining its international responsibility (Cheminova, 2007, p.14):

“The PIC convention has been ratified by more than 50 countries, and the programme has legal force in the EU. This means that methyl parathion and all products based on this active ingredient can only be exported subject to compliance with the following procedure: for each consignment of methyl parathion that Cheminova is to export to, for example, Brazil, the Danish Environmental Protection Agency must be informed in advance. Subsequently, the Danish Environmental Protection Agency contacts the relevant authorities in Brazil with a view to obtaining consent.”

The principle stating that “Environmental impacts are an important factor in connection with the manufacture and sale of chemicals. Responsible behaviour in this area is highly important to Cheminova, which entails that the company strives for continuous improvements in the area” (Cheminova, 2007, p.10) is not fitting so well with the fact that methyl parathion has been banned by the EU due to its chronic health impacts. This implies that Cheminova through its attempt to hinder the re-evaluation in Brazil tries to hinder an improvement within the protection of health and environment.

Cheminova's perspective on the practice around pesticides can be characterised as a simplistic understanding of the work of the farmer and the farm worker and of the relations between the farmer and the farm worker, since Cheminova claims that the use of protective equipment can be characterised as a personal choice.

Furthermore, the use of pictograms as a safety instrument is not supported by research, where the use of product labels and pictograms in Brazil has been analysed (Waichmana et al, 2007). The information displayed on product labels was found not to be effective in promoting protective and safety measures. Most farmers do not read the labels, reporting that the fonts are too small, and that the instructions are too long and in overly technical Portuguese. They also understood few of the pictograms, which are directed at the illiterate. In many cases, the inability to understand the information displayed led to the adoption of practices which actually increased exposure, risks to human health and environmental contamination. Since most interviews were conducted when smallholders were working, the researchers were able to observe farmers' attitudes and practices. Farmers' willingness to read product labels is not associated with educational level or farming experience. Even the more educated farmers do not read product labels before use. It is, however, associated with time of pesticide use. Farmers that have worked with pesticides for more than 10 years read the labels significantly more than farmers that have worked with pesticides less than 10 years (Waichmana et al, 2007).

### Practice in India

Cheminova's approach to safety culture can be characterised as simplistic and socially deterministic, since it is said that the Indian safety culture accepts a higher level of risks than in Denmark. The way this difference is discussed shows no understanding of safety culture as a consequence of the societal struggles between different stakeholders and their interests and different resources. Cheminova seems not to have considered whether existing elements of safety management in India could have been used, but have mainly transferred a Danish model. Besides this, Cheminova is not saying anything about how they address this difference in safety culture in general and specifically how they try to ensure that a transfer of a Danish concept actually improves the handling of health and safety problems in India. Ideally, Cheminova could be transferring the most hazardous activities to Denmark, since the safety culture is highest there.

The problems with the lack of capacity at the joint waste water treatment facility in India, seems only to be managed in a long-term time perspective, since an expansion of the facility is only at the planning stage.

### Other transnational aspects

The following issues can also be seen as aspects of Cheminova's transnational environmental management:

- The energy mix is very different at the plant in Denmark and in India with a much bigger share of diesel in India.
- Investment in further waste incineration in India
- Export of waste to a Norwegian waste facility

### Environmental management schemes

Only the Danish and not the Indian production facility are certified in relation to ISO14001 and OHSAS18001 approved. Plans for implementation of these standards are not mentioned in relation to India. It is not clear whether the conditions of suppliers and customers of Cheminova are managed through the two management systems.

### The phasing out of methyl parathion

The product is not registered and therefore not allowed to use in Europe, but will still be sold in developing countries. At the same time methyl parathion is still sold in USA and Australia.

In the description of the phasing out in Taiwan, Cheminova claims that methyl parathion is phased out in Taiwan – although it is only the class I version which is phased out, since micro capsules still will be sold.

### Availability of CSR report

Only the Danish and the global website have a reference to the CSR report. There are no references at the other national websites to the CSR report.

## **7. Need for further information about the Cheminova practice**

The following overall types of information are needed from Cheminova in order to describe and analyse the Cheminova CSR practice in more details:

- 1) What is Cheminova's market share in Brazil and what is Brazil's share of Cheminova's total turnover (looks like this share is between 18% and 24%)?
- 2) How do Cheminova intend to become "better" and at the same time "cheaper"? Are there any contradictions between these two objectives?
- 3) What is meant by "new generic products"? Normally generic products are not seen as new!?
- 4) Are new generic products the same as "new active ingredients"?
- 5) The plan for phasing out of Class I products: is it possible to get a copy of the plan? Why is the non-phasing out of methyl parathion not mentioned in the 2007 report, but only in the 2006 report?
- 6) Table at p. 12 in the 2007 report: what is meant by: "The new class I products mentioned in the table all belong to countries which are not covered by the phase-out programme"
- 7) Why is the phasing out plan for the Class I products only dealing with countries outside USA, Canada, Australia and the EU?
- 8) Why is this phasing-out-plan for Class I products remarkable? The phase-out plan has been acknowledged by the FAO, which in its report from the "1st FAO/WHO joint meeting on

pesticide management and 3rd session of the FAO panel of experts on pesticide management 22-26 October 2007" has found reason to draw attention to Cheminova's plan as a concrete initiative from the pesticide industry aimed at reducing the availability of the most toxic substances in developing countries

- 9) What is the strategy behind the planning of which products are produced in Denmark and which in India? Is it toxicity, environmental regulation etc.?
- 10) The pictograms are presented on big posters with written explanations: how are these posters supposed to be used by illiterate farmers?
- 11) How is the transfer from test fields to 'real' fields for a product taking place? How is transfer of a product for use from one country to another country?
- 12) What does this statement imply: "Providing training in correct product use is still an integrated part of the marketing efforts? Here, the efforts of technical employees as well as those of the sales personnel are regularly reported and assessed"
- 13) What does this change imply: "Integrating product stewardship activities in Cheminova's new regions under which the pre-sent subsidiaries belong, so that the division of responsibility reflects the new organisation"?
- 14) How are chronic (long-term) health and environmental impacts integrated in the development of active ingredients? What are the long-term impacts in focus?
- 15) What do the efforts to develop "patentable formulations" imply in the innovation activities of Cheminova?
- 16) How is the focus on "more effective, safer and more stable formulations with approved accessory agents" affecting the innovation of new formulations?
- 17) Why are there an increasing number of formulations based on organic solvents (increasing from 53 in 1998 to 64 in 2007) (although the percentage of VOC based formulations is decreasing)?
- 18) Why are there (apparently) no efforts to reduce the higher frequency of spillages and wastes in India?
- 19) There is big percentage of contract workers in India before the peak seasons. Why is this so here and how are the right competences of contract workers ensured?
- 20) What employees at the facility in India are included in the calculation of the frequency of accidents? Is it all employees, including contract workers? Is it only production employees or also administrative staff?
- 21) What does this imply in terms of environmental impact?: "The reason for the fall in the volume of hazardous waste for depositing in India is that it has been possible to use a significant proportion for processing"
- 22) What is the difference between formal and informal supplier screenings?

- 23) What are the consequences if the directors in Cheminova are not complying with the core business principles? What are the opportunities of the directors to discuss contradictions between the business principles and the business targets they have to fulfil in terms of economic performance etc.?
- 24) The energy mix is very different at the plant in Denmark and in India with a much bigger share of diesel in India. What is the background to this difference? Difference in activities, in energy supply etc.?

## ***8. Discussion of Cheminova's CSR practice***

Based on Cheminova's description of its CSR strategy and practice the following statements are important to discuss in a further assessment of Cheminova's CSR practice:

- A) Why are only the Danish and the global websites having a reference to the CSR report? There are no references at the other national websites to the CSR report.
- B) It is said in the CSR report covering 2006 in the description of the Code of business principles: "It is furthermore ensured that each Cheminova company is a member of a local/regional industrial organisation which, among other things, is involved in product stewardship" What kind of product stewardship activities are SINDAG in Brazil involved in?
- C) How do Cheminova define "irresponsible use" of pesticides in general and specifically in Brazil?
  - How do Cheminova get information about the actual use and how is this kind of information used in the product development and market strategy?
  - Why does Cheminova think it is enough to remove the name of some Brazilian states from the labels?
- D) What part of Cheminova and its subsidiaries, its suppliers and its customers are the ISO14001 and OHSAS18001 certifications covering?
  - What are seen as important environmental aspects and occupational hazards in the two management systems?
  - What environmental and OHS competence have Cheminova built and how in different parts of the organisation to be able to live up to policies and the targets in the ISO14001 and OHSAS18001 management systems?
- E) Cheminova has established a policy for external companies that manufacture and package end-use products under subcontracts. How is this policy implemented as part of the supply chain management and having influence on the practice of the suppliers?
- F) To what extent is Cheminova having dialogue with environmental NGOs, farm workers' organisations etc. in countries where pesticides are sold and applied as part of its ISO14001 obligations to have a policy for dialogue with external stakeholders?
- G) What does it imply that the Cheminova phasing out plan is focused on class I ready-to-use products?

- Does it imply that Class I ingredients are still produced by Cheminova and sold but only as class II or III ready-to-use products?
- Does it imply that Class I ingredients are still produced by Cheminova and sold to other companies, which (could) sell these ingredients as Class I ready-to-use products?

H) What role does Cheminova see the following elements and stakeholders having in a safe use of pesticides when products and application strategies are developed:

- the active ingredient
- the formulation
- the packaging
- the labelling, including pictograms
- the Cheminova sales staff
- the local vendor of pesticides
- the landowner
- the farm worker
- the equipment used for mixing, spraying etc.
- the gear used by the user
- the knowledge of the user
- the local government
- the water quality in the area where a product is mixed
- the local climate
- etc.

I) Why is Cheminova selling pesticides, which are not allowed to be used in EU?

- Why is the level of protection applied in the EU not used as a global standard by Cheminova?

J) What is the understanding in Cheminova of the decision-making around the use of protective equipment at farms?

- Is this seen as the decision of the individual farmer and/or farm worker, which the campaign slogan in Brazil: "EPI ou UTI – Você decide" could indicate?

K) Cheminova sees great differences in the scope and quality of the investigations required in order to obtain approvals in the individual countries. How are such differences handled?

- Does Cheminova have an understanding of a minimum of investigations, which the company finds necessary to carry out?

L) Why is Cheminova still selling methyl parathion in its most toxic form (class I) to eight countries (whereas the product is registered in more than thirty countries)?

- Why is the same level of protection of health not found important in these eight countries?

## **9. Proposals for a more sustainable CSR management**

The following proposals for a more sustainable CSR management in Cheminova have been developed as part of the analysis of the CSR reports:

- Would it be possible only to sell products to licensed farmers, where a license would imply the presence of equipment, the ability to proper use etc.?

- Could other plant protection concepts based on products that are non-toxic to humans and animals and based on co-existence of plant and “pests” become the core of the business strategy, including biological protection?

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