



Corporate Social  
Responsibility Report  
2012

# Corporate Social Responsibility Report 2012



Responsible Care®



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Date of issue: March 15, 2013. The report is a translation of the Danish original edition  
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# Introduction

"Social responsibility is integrated into the daily operations and supports the successful development of the company. We believe improvements can be achieved if we set ambitious goals and measure the results. Therefore, we have now formulated a CSR strategy and defined new targets to ensure that Cheminova's mission on an ongoing basis is translated into increased food production through more plant protection, less chemistry and fewer resources."



Kurt Pedersen Kaalund

The starting point for the CSR activities is our mission to contribute to the world's food supply, and many important goals have been achieved. As the first company in our business we have completed a phase-out of the most toxic products, the so-called WHO class I products, in developing countries. Product stewardship activities and village projects in India and Brazil have subsequently been in focus. Energy optimization, improvements with respect to environment, safety and quality at our production plants, supplier management and approval of products have been other important focus areas.

The good results have been achieved through the efforts of my many colleagues in their everyday business and through a good understanding of the company mission and values. We are constantly working to ensure this internal understanding and support, so the values are practiced. With many milestones reached and good results achieved the time has come to challenge each other with new ambitious goals.

Under the headline 'Helping you Grow - Chemistry with Care' we have now established new goals for our efforts and developed indices for measurement of the results we have achieved. Through our product portfolio we will help to increase food supply, reduce exposure to chemical products and use fewer resources to manufacture the products. In short: More plant protection, less chemistry, fewer resources.

The indices we have developed and which are described in the report allow us to measure the results we have achieved, and in the CSR Report for 2013 and onwards we will be able to visualize the progress made. We believe that ambitious goals and measuring of the results will result in increased awareness throughout the organization and further improvement of the results.

The CSR Report for 2012 in full constitutes the annual reporting, which is required for members of Global Compact. The report describes our progress on

implementation of the principles of UN's Global Compact, and thereby also Cheminova's contribution to UN's objective on eradication of hunger and poverty, which is a chief aim in the UN millennium goals. We report according to GRI level B and the rules laid down in the Danish financial statements act.

Also in 2012, our many stakeholders have shown great interest in our work with CSR and the dilemmas and challenges associated with it. The dialogue has given us valuable input and inspiration for the work also with these activities.

It is a wish from my colleagues and myself that the report will be well received, and that it will form the basis of a continued positive dialogue about CSR.

Kurt Pedersen Kaalund  
President & CEO  
Cheminova A/S

# About the report

This report provides a status on Cheminova's work within the area of Corporate Social Responsibility (CSR) in the calendar year 2012 and thereby fulfils the reporting requirements set out in Section 99a of the Danish Financial Statements Act (Årsregnskabsloven) in accordance with the exception in paragraph 7. The CSR report provides information about Cheminova A/S, all subsidiaries and joint venture companies with an ownership of more than 50%. The target audience of this report is employees, the authorities, shareholders, customers and suppliers as well as any individuals and organisations who may have an interest in Cheminova.

It is our intention that the report with its detailed articles on specific activities from 2012 will provide the reader with insight and understanding of the scope of our CSR work, and how these activities are an integrated part of the day to day business of the company.

## Global Compact and Global Reporting Initiative (GRI)

The report provides an update on our progress under each of the ten principles of UN's Global Compact as well as reporting on GRI indicators at level B.

## Organisation of the CSR work

Organisationally, the CSR work is rooted in Cheminova's day-to-day top management, the Global Executive Committee (GEC), with whom the CSR work has been agreed and who has approved this report. The focus areas are selected by the CSR steering group with the objective of providing an enlightening and systematic reporting on our CSR activities within a number of important areas.



Biomass at the factory in India. See page 30.

The inspiration for selecting the specific issues addressed in the present report is based on input and feedback from the stakeholders which have shown an interest in Cheminova's CSR activities throughout the year.

## Content of the report

The report includes facts and short sections on fulfilment of set targets. Furthermore, the report contains detailed articles on progress in selected focus areas from 2012 and special initiatives with importance to our business area. The CSR targets and focus areas for 2013 and onwards are presented as an overview table and as a detailed action plan for the individual focus areas.

Additional information on Cheminova's CSR activities including progress on the 2012 focus areas and the targets for 2013 is available on our home page [www.cheminova.com](http://www.cheminova.com).

## Dilemmas and shared responsibility

It is Cheminova's mission to contribute to

the world's food supply. Efficient agriculture is one of the prerequisites for achieving the UN goal 'End poverty 2015 – The Millennium Development Goals', which among other things are about reducing hunger, poverty, child mortality and improving public health. Nevertheless, Cheminova faces a number of dilemmas as a supplier of products to societies and countries where the conditions are significantly different from those in Denmark, in particular when it comes to safety and correct use of the products. As a company we have a shared responsibility to improve environmental and working conditions, especially in connection with our own production in developing countries, but also through supplier control and product stewardship. The CSR report describes how we address such issues.












## CSR Strategy
















Cheminova's new strategy for future work on CSR 'Helping you Grow – Chemistry with Care' is presented in full along side with the specific action plan for 2013 and onwards.



# Fulfilling CSR targets for 2012

Overview of targets and fulfilment. Fulfilment of the specific areas is described in the paragraphs "Follow up on targets" in the individual sections of the report.

Target		Fulfilment
<b>Village projects</b>		
India: Extension of the 'Aakash Ganga' water conservation project		Project expanded with 25 acres (ca 10 hectares)
India: Continuation of the project 'Saheli' on women empowerment on safety, health and livelihood		Project expanded with further 5 villages
India: Project on specific improvements, which has been accomplished in the two villages Pabdara and Ksheersagar, to be expanded in further two villages		Project expanded with the villages Ekalduna and Narukheri
Brazil: Project among small-scale banana farmers in the state of Goias to be continued		Continued as planned. The possibilities of continued cooperation with the Ministry of Agriculture is examined
Brazil: A project on community development and safe and environmentally friendly control of plant diseases to be launched among small-scale banana farmers in an environmentally sensitive area in the state of São Paulo		The project which is focused on low environmental impact has been launched
<b>Helping you Grow – Chemistry with Care</b>		
With selected years from the period 2000-2010 as baseline, an index will be prepared illustrating the area of farm land where the crops and thus the food production is protected by Cheminova's products. The index will be made on the basis of valid data from a relevant basic year		An index based on plant protection products produced by Cheminova has been prepared
With selected years from the period 2000-2010 as baseline, an index will be prepared illustrating the quantity of Cheminova plant protection products used per area unit. The index will be made on the basis of valid data from a relevant basic year		An index based on the use of xenobiotic chemicals in Cheminova's plant protection products has been prepared
With selected years from the period 2000-2010 as baseline, an index will be prepared illustrating selected, essential resources used by Cheminova to manufacture plant protection products compared to the area of farm land treated. The index will be made on the basis of valid data from a relevant basic year		An index based on the use of fossil fuels for the production of intermediates and finished products at Cheminova's factories in Denmark and India has been prepared
In the period 2012-14, development of at least 20 formulations with a low content of volatile organic solvents		At the end of 2012, 12 formulations had been developed
In the period 2012-14, lower average toxicity of newly developed formulations measured through the classification of the formulations will be reached		The part of unclassified products is more or less unchanged from 2011 to 2012. No class I products have been developed, but more class II and less class III products have been developed
<b>Production</b>		
India: Energy consumption for the production of three large products to be reduced by 3% per produced volume		Energy consumption reduced by 12% compared to 2011

Target	Fulfilment	
Production		
India: Frequency and seriousness of incidents and accidents at work to be reduced by 5%		No accidents at work. Frequency of non-reportable incidents at work reduced by 40%, seriousness rate reduced by 10%
India: The production at the Intermediate Division to be certified according to ISO 14001 and OHSAS 18001 in 2013		Work is proceeding as planned
Denmark: Re-certification of the company's environmental management system according to ISO 14001 and OHSAS 18001		Certificates renewed
Denmark: Certification of the company's energy management system according to ISO 50001		Certification achieved, but the planned fulfilment of the additional demands from the Danish Energy Agency was not achieved
Denmark: Education and training of employees in better attitudes and safer behaviour according to the programme SAFE being spread in the organisation during 2012-13		The programme was spread to half as many employees as planned
Denmark: Quantity of hazardous waste from production of a fungicide to be reduced by half		Quantity of waste reduced by 60%
Denmark: Energy consumption for the production of an insecticide to be reduced by 8%		It has not been possible to reduce the energy consumption
Australia: The water consumption in production cleaning processes will be minimized as part of the plant's water saving programme		Experiments have been successfully completed. Final validation expected in 2013
Australia: It will be ensured that external contractors work in accordance with our demands on health, safety and environment		Manual for external contractors implemented as planned
EU chemicals regulation		
Registration of the pre-registered substances that have to be registered before the end of 2013		Plan for registration is followed
Supplier management		
In Region International, the supplier management will be rooted with a person with a technical background		In all regions, supplier management is now rooted with a person with technical background
Human Resources		
Target: Maintain knowledge of the company's mission, vision and values. Activity: A storytelling leaflet of the company's values is to be distributed to all employees globally. The leaflet will be published in Danish and English		The leaflet has been published in Danish, English, German, Spanish, Portuguese and Russian and distributed to all employees
Implementation of values to all employees in Denmark. Activity: All managers have at meetings or in other activities worked with implementation to the employees		Meetings and activities completed with all employees as planned
In 2013 an employee survey will be accomplished in the global organisation. The survey will give a overview of the employees' knowledge of the company's values. The survey may be part of another investigation		According to the newly established HR strategy the survey is postponed until 2014
Preparation of a global HR strategy to ensure increased and more structured focus on Human Resources in Cheminova. The strategy will consist of elements which support Cheminova's business strategy up to 2015 and it is expected to be rolled out during the next years		A global HR strategy for the period up to the end of 2016 covering attraction, development and retention of employees has been approved



# CSR targets for 2013 and beyond

New targets have been established for the years to come. The targets are described in greater detail in the action plan on page 38.

## Village projects

### India

- In 2013, further 25 acres will be included in the project "Aakash Ganga" – conservation of rain water that otherwise would be lost through run-off.
- In the Saheli project on women empowerment on safety, health and livelihood establishment of self-help groups will be supported.
- The effect of the project activity will be evaluated for two villages and a plan will be made how the project can continue without the participation of Cheminova.

### Brazil

- The project among small-scale banana farmers in the state of Goiás will be continued in 2013 and so will the dialogue with the Ministry of Agriculture with the purpose of establishing a closer cooperation.
- The project on safe and environmentally friendly control of plant diseases will in 2013 be extended to more banana farmers in an environmentally sensitive area in the state of São Paulo.

## Helping you Grow – Chemistry with Care

- Index 1\*: More plant protection. To be reported for 2013 and onwards.
- Index 2\*: Less chemistry. To be reported for 2013 and onwards.
- Index 3\*: Less resources. To be reported for 2013 and onwards.
- At least 20 formulations with low content of volatile organic solvents will be developed in the period 2012-14.
- Lower average toxicity of newly developed formulations measured through classification of the formulations in the years 2012-14.

## Product stewardship

- In India, Cheminova takes part in a project where the opportunities to return used packaging are examined with focus on environmentally correct disposal.

## Production

### India

- The energy consumption for the production of two large products will be reduced by 2% per produced volume in 2013.
- The content of COD in the treated waste water will be reduced by 3% in 2013.
- The frequency and seriousness of incidents at work will be reduced by 2% in 2013.
- In 2013 the production at the Intermediate Division will be certified in relation to ISO 14001 and OHSAS 18001.

### Denmark

- Operation of the biological wastewater treatment plant will be reassessed in 2012-15 so that the potential of the plant is utilised in the best possible way.
- The quantity of waste per produced unit and Cheminova's total costs for treatment of hazardous waste will per year in 2012-14 be reduced by 5% and 10% respectively.

### Australia

- Obtain certification of the company's environmental management system in relation to OHSAS 18001 in 2014.
- In 2013, the waste water treatment will be improved and renewed permit for discharge will be applied for.

## United Kingdom

- In 2013, environmental and safety conditions will be reassessed and applications for changes will be sent to the authorities.

## Germany

- In 2013, a filter to reduce the emission of dust from the production will be installed.

## Supplier management

- In 2013, a number of the company's employees will be trained to audit suppliers.

## Human Resources

- In 2013, a global policy and procedure, describing how Cheminova can attract the best match for each position, will be established.
- In 2013-14, a new appraisal system will be developed and implemented. The system will among others be linked to the KPIs and values of the company. All employees will have minimum one appraisal per year.
- In 2013, visible and successful career paths will be established globally. Also a new title and benefit structure will align role and responsibilities of each specific key position.
- Mapping for establishing a country based classification of risk of corruption. Training activities for selected employees.
- In Denmark the programme SAFE will be continued to ensure that all employees are educated and involved by the end of 2013.

\*Read more on page 23.





# Cheminova's business activities

## Cheminova's mission:

We help improve quality of life for the world's population by supplying products that help farmers increase yields and quality of crops to satisfy the global demand for food, feed, fiber and energy.



Market with fruit and vegetables in Brazil.





# Plant protection

**Cheminova's primary activities are the development, production, marketing and sale of chemical products for the protection of agricultural crops worldwide.**

The framework for the company's business activities is Cheminova's Code of Business Principles and Cheminova's mission, vision and values. These support and are consistent with the UN Global Compact, the European Chemical Industry Council's (CEFIC) Responsible Care programme and the FAO Code of Conduct. In addition, Cheminova is a member of various global, regional and local professional organisations like for instance CropLife and resistance groups under CropLife.

## Need for plant protection

UN's Agriculture and Food Organization,

FAO, estimates that by 2050 70% more food than today has to be produced - on roughly the same agricultural area, which is already under cultivation. The yield per hectare should increase significantly just to keep pace with the growing population. A consequence will be an increasing need to protect crops, which falls well within our mission and business area.

## Products

The company produces herbicides, insecticides and fungicides. The products are sold primarily as ready-to-use plant protection products under our own brands, own registrations (use permits) and labels.

Registration work is detailed in a separate article (see page 12). On Cheminova's website a brief description of the general approval conditions for plant protection products can be found.

Cheminova also supplies active ingredients which are used for further processing to produce ready-to-use plant protection products. Moreover, we also manufacture and sell a number of fine chemicals for industrial use as well as micronutrients for agriculture.

Read more about the activities in Auriga's Annual Report.



Plant protection.



# Product stewardship

Information about correct use of the products increases the safety of the users.

## Cheminova's sales in 2012

Cheminova's sales of plant protection products include supplies of both active ingredients and ready-to-use formulations to more than 100 countries. In 2012 like the previous year, most sales were handled by Cheminova's subsidiaries.

For further comments on distribution between product types and geography, please refer to Auriga's annual report.

## Sales of the most toxic products

After the previous year's phase-out of the most toxic products in developing countries sales have been replaced by less toxic plant protection products. Products belonging to WHO's class Ia 'extremely hazardous' and Ib 'highly hazardous' are no longer sold to farmers in developing countries.

In 2012, the total sales to all countries of class I products made up less than 1% of total Cheminova sales. The breakdown of products by countries can be seen in the table below

Overview of which class I ready-to-use products Cheminova sold in 2012 and where

Country	Product
Australia	Methyl parathion EC
	Methomyl EC
	Omethoate EC
USA	Methyl parathion EC
Spain	Fenamiphos EC

EC = Emulsion concentrate

## Product stewardship

The underlying principle for Cheminova's stewardship of plant protection products is risk reduction. The cornerstones are observance of national legislation concerning approval, marketing and sale of plant protection products in all countries where Cheminova's products are sold. In addition, export is subject to EU legislation and the rules of the Rotterdam convention concerning 'prior informed consent' (PIC). Furthermore we comply with the rules of FAO's Code of Conduct, and we are members of national/regional trade associations engaged in risk reduction in connection with the use of plant protection products. Further, we do not sell any products belonging to WHO Class Ia and Ib outside the USA, Canada, EU, Australia and Japan.

In 2012, training and guidance on correct and safe use of Cheminova's products have been an integrated part of the daily marketing activities in developing countries. Labelling and instructions for use, personal contact with distributors and users plus participation in campaigns are some of the tools employed to promote safety. The quarterly reporting to the CSR steering committee on product stewardship from countries and regions has been continued in 2012.

## Award for a newly developed packaging

Together with a supplier, Cheminova's German subsidiary has received an award for a newly developed cardboard packaging making control of slugs easier and safer. The award was given for a re-

closeable cardboard packaging which has been protected from improper use and which is easy to handle when slug pellets have to be applied.

## Reduction of risks

The following highlights the risk reducing activities in Brazil and India, respectively, where the last class I products were sold in 2010.

### Brazil

In Brazil, Cheminova's sales of methyl parathion in the form of WHO class I products have stopped and been replaced by less toxic insecticides, such as micro-encapsulated methyl parathion (WHO class II) used in the growing of soybeans and cotton at professional large-scale farms. Sales of this product exclusively takes place in large packaging which are not attractive to small-scale farmers, and sales are limited to states where soybeans and cotton are grown by professional farmers.

Cheminova's Brazilian subsidiary is connected to a hotline open around the clock for reporting and first aid information in case of spillage and accidents.

In 2012, a series of 95 farmer and customer meetings with all together 7.600 participants were conducted. The meetings had a.o. focus on safe and correct use of plant protection products and personal protection equipment.

Cheminova's subsidiary has continued its partnership in the national organisation for handling of used packaging (inpEV)



whose purpose it is to promote proper disposal of used crop protection product containers. The organisation reports an increase in the tonnage of containers collected in 2012. In addition to these activities projects among banana farmers have continued, see page 27.

#### India

The extensive safe use programme with training of dealers and farmers has been further expanded to include more than 600,000 persons in 2012. The programme also includes posters, video shows, demonstrations and hand out of personal protection kits and first aid kits. The activities are carried out in collaboration with local authorities wherever possible. The programme is being continued just as the CSR activities in the villages described on page 24.



Used packaging is recycled industrially in Brazil. Cheminova is part of the national organisation for handling of used packaging, inpEV, in Brazil.





# New requirements for registration of plant protection products in EU

Cheminova's products can only be sold after a very thorough assessment by the authorities.

By Liz Mcquarrie, Vice President,  
Registration & Biological Development

A plant protection product can not be registered for use in the European Union until it has been thoroughly tested and it is scientifically established that:

- there are no harmful effects to human health (consumers, farmers, local bystanders).
- there are no unacceptable effects on the environment (soil, groundwater, surface waters, and non-target organisms such as birds, mammals, bees, earthworms).
- there is sufficient efficacy against target pests.

A plant protection product will only be considered safe for use in the field once the risk has been shown to be acceptable over a wide range of tests. It is time-consuming, complex and expensive to register a plant protection product in Europe, however the regulatory framework is clear and harmonized, ensuring the highest standards of product safety for the consumer and the environment.

## Review of substances already in the market

In 1993 the European Commission initiated a harmonised review process for all active substances in plant protection products. This process was completed in 2009 and, of approximately 950 active substances on the market in plant protection products in 1993, around 250 have successfully completed the risk assess-

ment and are allowed to be used in modern plant protection products. Although this first review of active substances is now complete, new data are continually required and new methods of testing are continually developed. Some of the assessments which need to be conducted as part of the review are described in this article.

## Human health risk assessment

Ensuring acceptable risk to humans is considered of paramount importance when authorizing any application for use of a plant protection product in Europe. Exposure may take place through handling of the products, being present in a treated area or through consumption of treated crops.

## Farmers, workers and bystanders:

Focus is not only on farmers and operators who may apply the product according to safe label instructions using personal protective equipment, such as gloves and overalls. Focus is also on workers who may re-enter the treated crop to perform crop inspection, maintenance or harvesting activities, and bystanders who may be nearby during the application or residents, including children, who live in close proximity to farmland.

Potential exposure is initially calculated using mathematical models based on worst-case assumptions. If there are any concerns, further data can be generated

to provide product specific refinements or if necessary full field trials can be performed to provide exposure data based on actual use. Using this step wise approach it is then possible to build up an accurate assessment, generating further data where it is considered most needed.

## Consumers:

Another key aspect to human risk assessment is potential exposure from the consumption of residues in or on food. Before use of a plant protection product on any crop that may be consumed by humans or animals it must be demonstrated that the potential residues remaining on the crop will not cause harmful effects.

The magnitude of these residues including a number of metabolites is then determined through supervised crop residue trials in order to establish the typical and maximum residue levels to be expected when the product is used according to the label instructions. This information is used to set Maximum Residue Levels (MRLs) in each crop where the product is used. MRLs are uniform across the EU to avoid trade barriers. All MRLs are independently evaluated by the European Food Safety Authority (EFSA). The EFSA confirms, via modeling, that the potential of exposure to residues in food and water will not result in any harmful effects to adults or children either in the short term or when considering exposure over a lifetime.





The effect of a new fungicide is documented in a potato field.

### Environmental risk assessment

In order to assess the risk of contamination of the environment, or the potential risk to non-target organisms, the fate and behaviour of a compound in the environment must be addressed.

#### Behaviour in soil, water and air:

For an active substance used in, on or over soil, a study of its breakdown and mobility in a variety of soils is required. Similarly, for substances that may be used in or near water, information must be supplied on their fate in the aquatic environment. The information provided must be sufficient to allow predictions of environmental concentrations in soil, groundwater, water, sediment and air to be made.

#### Effects on wildlife:

The environmental risk assessment for non-target organisms aims to ensure that there are no significant acute or long term changes to populations, nor to the function of the ecosystem as a whole. Setting protection goals for ecosystems that aim to maintain biodiversity is a complex task. Environmental risk assessments for effects on non-target organisms are conducted based on a comprehensive suite of laboratory and field ecotoxicity studies, performed in accordance with recognised international Guidelines\* to determine effects on a range of 'sensitive' indicators including birds, mammals, fish, honeybees, earthworms and several others.

### Efficacy assessment

Field tests to prove a high degree of efficacy against target pests, whether weeds, insects or fungi, are conducted over a range of climatic conditions and fields which are representative for the type of crop to be protected.

The tests are conducted to develop the exact use instructions for the farmer to make sure that the product works most effectively using the least amount of product.

\* International Guidelines for testing of chemicals are available from e.g the OECD (Organisation for Economic Cooperation and Development), the ISO (International Organisation for Standardisation), the EPPO (European and Mediterranean Plant Protection Organisation) and the OPPTS (Office of Prevention, Pesticides and Toxic Substances).



# Anti-counterfeit initiatives in Russia and the CIS Countries

Fake products make up an increasing problem with great risks.

By Lena Larsen, Cheminova A/S, and  
Alexander Dolgikh, Cheminova Russia

Fake pesticides constitute an increasing problem according to the European Crop Protection Association (ECPA). Up to 10 % of the applied plant protection products in Europe are based on illegal imports of active ingredients and faked end use products (also called counterfeit products). None of these have been tested for safety and health risks and may contain any unknown and unapproved chemicals. Counterfeit and illegal products constitute health and environmental risks and undermine the strict regulation of plant protection products. Read more on ECPA's website ([www.ecpa.eu](http://www.ecpa.eu)).

## Illegal products in CIS countries

Feedback from the market estimates that up to 25% of plant protection products sold in the CIS countries (Community of Independent Nations) are falsified. The exact magnitude of the problem is unknown because it relates to black market activities. Basically law enforcement against illegal imports and falsified products is the responsibility of local authorities. However the trade organizations as well as individual companies also make an effort against the spread of counterfeit products.

Fake products constitute an economic burden on our business and we have experienced unjustified customer claims when illegal products are mistaken for genuine and approved Cheminova products.

We decided to investigate the matter in more detail in relation to our products in order to get a better understanding of the risks that might be associated with counterfeit products and the magnitude of the problem. A core team consisting of people from the Russian subsidiary and Global Supply Chain Management in Denmark was established and started to compile information.

The team noted that counterfeit plant protection products do represent a substantial risk because:

- The chemistry of counterfeit pesticides is often of low quality that does not fulfill legal requirements and thereby carry high risk for insufficient efficacy, damage of crops and for the health and safety of farmers.
- Legislation for transport and handling of dangerous goods is often ignored by a counterfeiter. This means increased risk for leakages of low quality products to environment and consequently also a risk for human health.

Warehouses in Russia are not easily accessible.





- Falsified products are, as rule, produced under inadequate safety standards.

Taking both the nature of the risks and the magnitude of counterfeit products issue into consideration, we concluded that Cheminova has a commercial as well as a social responsibility to participate in preventing sales and use of falsified products, and a local initiative was launched.

#### Cheminova Russia's anti-counterfeit initiative

In 2012, Cheminova has therefore implemented an anti-counterfeit initiative for selected products in order to help our customers in the CIS countries to identify Cheminova's authentic products and thereby help farmers and dealers avoid falsified products.

For end-users and distributors who purchase Cheminova's plant protection products, we provide information about the original packaging and the properties of the original product. This information is published via the regional official distributors through mass media, and through other promotional activities (such as workshops, exhibitions, etc.)

In order to help our customers to select the original products we have added a unique hologram to the label.

This gives the opportunity for our customers to quickly identify falsified products when exposed to them. Moreover hidden marks on packaging have been implemented. This may minimize the need for expensive and time consuming analyses for product identification in case of claims occurring from unsatisfactory field efficacy.

We believe that counterfeit plant protection products can only be prevented from entering the market by joint and coordinated efforts of government agencies, legal manufacturers, and other relevant organizations. Cheminova participates in such cross-organisational activities in Russia and other countries.



Special marking makes fraud difficult.





# Portrait of Headland's manufacturing unit

Headland is Cheminova's subsidiary in the United Kingdom with a manufacturing unit in Wales.

By Colin Roberts, Operations Manager, Headland

Headland Agrochemicals Ltd. became part of the Cheminova group in 2001. The company operates a plant based in Wales at which liquid fertilizer products – micronutrients – are developed, manufactured and packaged. In addition to this primary function of the business, the facility is also filling plant protection products, such as herbicides and fungicides. All operations carried out at the site meet ISO 9001 Quality Management System certificated standards.

The micronutrient business has expanded rapidly over the past 25 years and products are now exported to more than 30 countries worldwide, covering Europe, the Middle East, Africa, Australasia, North and South America.

## Product integrity is never compromised

We understand the levels of trust placed in our products by the customer and we go to great lengths to ensure that our product integrity is never compromised. We adopt a number of strategies to ensure that our products do not contain extraneous substances which could cause agricultural, ecological or toxicological problems.

## Making plant performance visual

The core values of the operation are embedded within the culture through the "Headland Balanced Scorecard" with four quadrants which are:

- Safety
- Quality
- Efficiency
- Continuous improvement

Each quadrant is interlinked, and each quadrant can have a negative or positive influence on another. For example, a continuous improvement idea may lead to efficiency savings in terms of time, but it may have a detrimental effect on the quality of the product. There are posters depicting the "Headland Balanced Scorecard" placed in various prominent locations within each department, these posters are complemented by a wallet-sized laminated card which is distributed to each employee. Together with the artwork, a monthly Balanced Scorecard Report is compiled and distributed to each employee, so that everyone is aware of how we are performing in relation to these values.

## "Excellence in Application"

In recent years the facility has made further strides as a result of the continuous improvement culture. The team has won an award for 'Excellence in Application' of Business Improvement Techniques. This accolade was awarded by a local Engineering College; we were able to take the honour despite tough competition from a number of prestigious companies such as Airbus UK and other larger concerns.

## Legislative Compliance, risk identification and management

Due to the growth in production volume, the facility now handles inventory levels which are governed by the United Kingdom COMAH regulations. (Control of Major Accident Hazards (<http://www.hse.gov.uk/comah/>)).

COMAH is concerned with the risks and hazards to both people and the surrounding environment. The majority of the hazards present on the site pose a risk to the environment rather than to humans, we are therefore, adopting an ERA (environmental risk assessment) point of view which means we are looking





Correct labelling.

at events which could pose risks to flora and fauna and indirect risks to people, for example via contaminated drinking water or crops.

As part of our compliance with these regulations, we have implemented a detailed Major Accident Prevention Policy, a safety report and a plan for emergency measures in case of accidents.

## Employee Feedback

Lee Bridgwater – Deputy Filling Manager: “Currently, I am the deputy filling manager at the facility. During my 10 years with the company it has developed from a small manufacturing site into an operation with an output level that has tripled over the last few years. My overall objective during my working day is to ensure that the team focuses on high quality levels and overall manufacturing efficiency with an emphasis on workforce safety. Key environmental concerns are also at the forefront of our activities with all herbicides and waste segregated from other materials. A focus this year has been to review the waste management systems to guarantee that cross-contamination does not occur.”

## Headland’s strategy against cross-contamination

### 1. Education

Educating our staff by in-house and by accredited external providers about the possible impacts of cross-contamination, considering these impacts from both the customer’s and the business’ perspective. One of the Company’s beliefs is that product integrity and product quality is the responsibility of all of our employees.

### 2. Policy and procedures

As a company we have developed a comprehensive and robust catalogue of policies and procedures which are rigorously adhered to. Written instructions for the formulation and filling of products are composed in such a way that cross-contamination is always in mind and is always prevented.

### 3. Physical separation and segregation

The production facility is built such that there is physical separation between the Micronutrient and Plant Protection formulation and filling areas. To complement the physical separation we have also implemented a highly visual approach, utilizing different coloured labels on IBCs (mini bulk containers), colour-coded pipework and clear signage.

### 4. Quality testing

We have invested in technology which facilitates highly rigorous and sensitive testing of our products. The testing regime adopted has a two pronged approach. Firstly, the product specifications are verified, and secondly, of equal importance is the validation of the product’s integrity. A procedure was developed for the testing of pre and post filling line washes, in addition to the testing of the final product itself. The procedure involves the use of chromatographic analysis and was developed in collaboration with the quality control laboratories at Cheminova in Denmark.



# Global Formulation Development and Support

Development of differentiated, effective products with reduced toxicity and environmental impact is a prerequisite for providing a future-proof product portfolio.

The activities are divided into two main areas: development and support. In different ways they contribute to our bringing the right products to market. App. 40 employees in Cheminova's global organisation are engaged in formulation technical tasks.

The primary job within development is to create differentiated plant protection products; in other words to develop competitive products which are more effective, safer to crops, more selective and easier to use than existing products on the market. Securing patent rights is an integral part of the work.

Concerning support the primary focus is aimed at maintaining and extending our product portfolio with robust and modern plant protection products. Solving technical challenges in connection with production and marketing of differentiated products is the main purpose.

## Fewer volatile solvents

We wish to develop new modern products containing few – or no – volatile aromatic hydrocarbons which are traditionally used as solvents in plant protection products.

### Strict solvents standards in California

Formulations for the Californian market are subject to specific requirements concerning their environmental impact, termed VOC. VOC stands for volatile organic compound.

In an effort especially to limit smog and air pollution, the authorities have taken steps to reduce emission of these solvents – not just from plant protection products, but also from detergents, paint and cosmetics.

We have already developed water based versions of some of our insecticides. However, we have found that classic solvents improve dispersion and con-

tact effect and thus the impact on certain insects. That is why we are working on finding suitable alternatives where water alone is not sufficient.

### Solvents of biological origin

We have succeeded in identifying a suitable solvent consisting of modified animal fat which has been refined and treated in the same manner used in the manufacture of biodiesel.

This solvent has a classification that allows the final insecticide to meet the Californian requirements. At the same time, the challenge of manufacturing a stable product without forming unwanted degradation products has been solved.

This means that some of the advantages of the classic products have been retained while obtaining a new VOC classification.



Development work is building on global cooperation.

## Challenges in production of solvent free herbicide products

The developments of solid herbicide formulations over the last several years have improved our skills working across the global structure between the global formulation function in Denmark and the operational sites in our global organisation.

### Incompatible active ingredients are successfully brought together

Recently we have achieved to formulate new combination products of incompatible active ingredients with a new process step that leaves no solvent in the final product. This innovative process ensures that the active ingredients are protected from their mutual incompatibility without compromising the quality of the final herbicide product.

### Reduced amount of chemicals to control weeds

Our potent herbicide plant in India is designed in collaboration between the

Development departments in India and Denmark and was implemented by the Project and Formulation department in India. This is the result of a dedicated combined effort of our global formulation development capabilities.

The close contact between groups of technical development staff in the global organisation and production units gives us a full circle benefit of in-house experience on solid state formulations. This insures that we can further develop new processes into production of advanced solid, solvent free tailored products in the future.

Such products will contribute to safe farming with reduced input of chemicals to the farmland.

### Coping with dust and the risk of cross contamination

During the production process a key

point is to ensure the safe handling and complete control of dust from very potent herbicides. All the way through the process from design, development and production a strict focus is maintained on preventing potential exposure of the environment as well as other productions at the site. Since these herbicide products are effective at extremely low dose rates, even tiny amounts brought outside the formulation plant either by air or transport can result in contamination and damage to the plant life at the factory and pose a risk for contamination of other products.





# Supplier management - Strengthening the technical competence globally

Active supplier management is a vital element of Cheminova's CSR policy. In accordance with this it is integrated in the parent company and the subsidiaries.

In 2012, Cheminova has focused on improving and harmonising the supplier audits which are carried out. Among other things audits have been conducted in cooperation with an external consultant to get feedback on how to plan and execute our audits in order to make them as efficient and satisfactory as possible. Furthermore, we want to make sure that the results obtained and the information collected is valid and gives a representative picture of the supplier visited.

## Global team of Technical Responsible Persons

One of our 2012 CSR targets was the establishment of a global team of TRP's (Technical Responsible Persons) covering all of Cheminova's regions. With the appointment of a person for region international the team is now complete, and in cooperation with colleagues from Sourcing, Support & Scale Up and Safety, Health, Environment & Quality from Denmark it handles the overall global supplier management based on the Supplier Code of Conduct and Code of Business Principles.

In the subsidiaries supplier management is an integrated part of day-to-day procurement. Auditing of active ingredient manufacturers and formulators takes place in cooperation with the global team which is responsible for coordination and maintaining the global overview of activities.

A comprehensive mapping project is in progress, which will create an overview of where and when the individual suppliers are manufacturing which products. At the same time, the status of the related quality and CSR activities is collected.

Likewise, the team supervises that Cheminova's own production sites are operated in accordance with CSR policies.

## Focus areas

The team's most important focus areas are:

- Initiation of new production of ready-to-use products with suppliers
- Auditing of suppliers with reference to quality control and CSR
- Maintaining an overview of suppliers, products, auditing status and activities
- Handling of customer complaints

## Exchange of experience and training

In September 2012 the team met at the site in Denmark for two days of audit training in production plants, analysis laboratories and filling plant.

In this way the exchange of experience could take place based on observations of technical details and documentation from a working plant.

Audit of a supplier in Spain.



## Examples of inspected areas:

### Environment

Emission to air, water and soil, handling of hazardous waste.

### Health and work environment

Health check, labour protection, safety standards.

### Plant safety

Procedures and equipment e.g. for fire fighting, accident prevention, tidiness.

### Labour conditions

Child labour, wages and working hours.

### Product quality

Quality control and quality assurance of products.

### Dialogue and cooperation

constructive dialogue about improvements.





# Openness and dialogue

An open dialogue with the company's stakeholders is very important for integrating CSR in the business.

Cheminova strives to ensure and engages in a continued dialogue with its neighbours, e.g. the local community, authorities, educational institutions and politicians, while observing the limitations due to stock exchange rules, protection of sensitive personal information and general data protection rules etc., as well as legislation and competition rules impose on openness. We do of course engage in a continued and open dialogue with the relevant authorities in the countries where we operate.

A dialogue with the company's many stakeholders is a source of inspiration for the CSR work and the selection of focus areas presented in the present report.

The company actively strives to keep well-informed within the many subject areas of relevance to its operations as well as current and potential business areas. Via open literature as well as scientific publications and trade sources, the press, specific searches on topics and the internet, information and expressions of opinion in respect of CSR related issues are sought. Particularly concerning product properties, side effects and applications, and in general, issues linked to dilemmas and controversies within the company's sphere of interest.

## Local engagement

Cheminova plays a part in the local society where we operate facilities and employ people. We contribute to the local economy and offer a wide range of job opportunities. We make a point

of good neighbour relations and participation in local cultural life and activities. The influence on the environment from production plants is described elsewhere in this report.

In 2012, two open house arrangements were held at the headquarters in Denmark and additionally we had several groups of visitors (students, organisations etc.). Altogether more than 2,000 people visited the premises.

In countries where we have manufacturing facilities we have an on-going dialogue with environmental and other supervising authorities, for instance the Danish Environmental Protection Agency and the Gujarat Pollution Board in India.

## Investors

Of primary interest to stock market analysts and investors, a number of investor meetings are held both physically and online and are thus accessible to all stakeholders, including the more than 8,000 shareholders of the parent company Auriga. Presentations from these meetings including CSR related issues, among others, are publicly available on Auriga's and Cheminova's websites.

## Customers and suppliers

CSR forms part of the dialogue with the company's customers, many of whom appreciate to cooperate actively with Cheminova in promoting product stewardship and environmental responsibility among farmers. Information on the safe use of products – as mentioned in the

section on product stewardship – is an integrated part of the marketing of products to end-users in developing countries.

Suppliers are audited with focus on the environment, safety and labour standards in accordance with the company's Supplier Code of Conduct which forms the natural basis for a constructive dialogue.

## Employees

Also in 2012, there has been focus on implementation of the company values in the daily activities and in this connection a booklet in several languages has been distributed to the global organisation. The booklet gives a number of examples illustrating how the values live in the daily business. The examples deal with the impact of the company values on specific working situations for the individual employee and form the basis of a debate on this issue. In 2012, more than 25 newsletters were sent to employees in all subsidiaries. On several occasions CSR related issues were addressed in these newsletters.

CSR is regularly discussed throughout the global organisation in relation to the daily business. At the local level, e.g. co-operative relationship, general wellbeing of employees and continued education have been on the agenda. In 2012 a global human resource strategy was approved. This strategy runs until the end of 2016 and will improve the employee conditions in the global organisation.



# Chemistry with Care

Following up on targets.







# More plant protection, less chemistry, fewer resources

By means of indices we wish to illustrate development in respect to our goals for: More plant protection, less chemistry and fewer resources. We will report on progress in the CSR-report for 2013 and onwards.

Our chemical plant protection products contribute to the world's food production by protecting the agricultural crops against weeds, diseases and insect infestations. Plant protection is highly necessary in a world, where every eighth human being is starving, and where the agricultural production has difficulties keeping up with population growth. We express this contribution to food production in our index by the acreage of arable land, which is protected by the products we have sold.

We strive to reduce the amount of xenobiotic chemicals when we develop and optimize our products. In our index we express this by means of the amount of active substances, organic solvents and emulsifiers, which were applied to arable land through our products.

It is resource demanding to manufacture plant protection products. We strive to optimize our process technology in such a manner, that we consume less energy in production of the products. In our index we have decided to express the energy consumption by the amount of fossil fuels.

## Follow-up on targets

### Development of indexes

In 2012 a meticulous work on development and establishment of the three indexes designed for illustrating the development in the three areas of significant

importance for Cheminova's CSR work. The purpose has been to make the reporting simple and clear and based on data that can be audited by independent experts. Reporting based on these indexes is a novel feature in our business.

Concerning calculation of the acreage covered by Cheminova's products - which is part of index 1 and 2 - data calculations and methods have been developed in cooperation with an external source with extensive knowledge in this area.

### Index 1: More plant protection

**Definition:** Index 1 shows the development on global scale of the acreage of arable land, where crops are protected by Cheminova's products.

It means that we based on Cheminova's actual global sales of plant protection products will make an average calculation of the acreage of arable land these products have covered. Data from an independent source will be used for the calculations. Products distributed for other companies will not be included, as they do not reveal the exact recipe due to protection of intellectual properties.

A reference value is defined based on historical data.

### Index 2: Less chemistry

**Definition:** Index 2 shows the development in the amount of xenobiotic (not naturally occurring) chemicals applied through Cheminova's products by area unit.

It means that the same calculation of acre-



An increasing number of more efficient products means more plant protection and therefore increased food production.



Better products means reduced burden of xenobiotic chemicals.



More efficient and energy optimized production means reduced consumption of fossil fuels.

age which is used in index 1 is correlated to the application rates for the individual products and the content of xenobiotic chemicals.

A reference value for the amount of xenobiotic chemicals is defined based on historical data.

### Index 3: Fewer resources

**Definition:** Index 3 shows the development in consumption of fossil fuels in relation to the production at Cheminova's production plants in India and Denmark.

It means that we define a reference value for energy consumption in relation to the production from historical data. Going forward we will correlate our actual consumption of energy from fossil fuels (summarized for all products and all production plants) with this reference value. Fossil fuels will enter the calculations according to their calorific values. Electricity will enter the calculations as net consumption since Cheminova both produces and consumes electricity.



## CSR activities in India

At village level the activities are primarily about agricultural development in project villages in several states. Additionally activities are carried out on water conservation, women empowerment as well as engagement in the social development in neighbour villages near our factory site.

### Engagement in the local community in India

**In the local community where we operate manufacturing facilities, our activities play a positive part for the economical livelihood and development of the area. Further, employees with their families are part of the daily life of the local community.**

#### Local cooperation

In cooperation with local leaders and other interested individuals we support projects with the scope of improving the living conditions for the local population. Therefore we support and participate in several initiatives mainly centred on health and education. However our support also has covered a variety of other activities including sponsoring sports trophies and electrification of street lights.

#### Public health

At occasions, we have organized medical days, where the broad population in a village is offered free medical consultation by doctors and nurses and given medical treatment and assistance including glasses.

Further, we have recently provided an electrolyte analyser for improved blood analyses and diagnoses to the Welcare Hospital in the Kharod village.

We provided water coolers along with a water purifier to Public School Kharod for better health of students. We provided sweaters during the winter 2012 to 70 students and staff of a Primary School in Pardimokha.

#### Education

Cheminova's assistance to the local schools is directed at private and public schools and it extends from simple support of note books, distributing a booklet on parenting, support to sports events to

funding the salary of a teacher in a Primary School in the village Kharod. The school is run by the humanitarian organisation Human Resources Development Mandal. Further we have provided a scholarship for higher education of one student at the engineering college. With a view to motivate students of Public School Kharod we sponsored trophies for various inter class and inter group competitions. We also allowed students of the Engineering and Science Colleges to visit our factory for helping them to



School books contribute well to education at the local schools.





understand the kind of skills required for working in the industry. Also career oriented guidance was provided to students of the Management Institute of Ankleshwar.

### Tree Plantation

GIDC, which is an industrial development authority of the Gujarat environmental administration, has earmarked certain plots as Green Zone in the Panoli Industrial Area and entrusted Cheminova with a belt at the entry of industrial estate. As a part of the Green Zone development activities, we have planted more than 200 trees in this area.



Appreciation of SAHELI project by the Royal Danish Embassy in New Delhi: H.E. Ambassador, Mr. Freddy Svane of the Royal Danish Embassy, New Delhi, accepted an invitation to visit the village Ekalduna. During the daylong visit the Ambassador expressed a keen interest in the living conditions of the villagers, their families and the school children. He also engaged himself in a conversation with the members of the SAHELI group launched by village women earlier this year.

## Projects in villages

### Follow-up on targets

#### Project villages

In 2012 the focus of activities in the model villages has been continued improvement of agriculture practises supplemented with various aspects of general community development.

Impact assessment of two additional villages has been completed in Ekalduna and Narukheri. In the latter an internal assessment has been performed and this will be followed up by an independent evaluation in 2013.

#### Village Ekalduna in Madhya Pradesh

The focus on farm advisory services continued during 2012 as this has been the most important area for the villagers. The project directly covers more than 200 farmers in the model village but in addition the outreach has been to approximately 2200 farmers in the surroundings of Ekalduna. An impact review of the activities in this village has been performed in cooperation with the Royal Danish Embassy. The following main conclusions have been made:

- The project has contributed to a positive development in the area by a significantly improved farming productivity (increased yield and cost reduction).

- Further strengthening of partnership with the department of agriculture extension service should be considered.
- The participation in the training sessions has increased.
- The focus on safety when handling chemical products has increased.
- The SAHELI initiative needs strengthening. (Cheminova's team has recently mobilized local resources and is working in partnership with government departments on women empowerment socially, economically and politically).



Professor Ayyappa Masagi.

## CSR activities in India, continued



### The Aakash Ganga project is now covering about 10 ha

*Report from Mr. Harsh Tiwari, Assistant Regional Manager, Manager of the Aakash Ganga project in Maharashtra:*

#### Prospects of conserving water in rainfed agriculture

After successful implementation of the Aakash Ganga project in 2011, the baton of success was extended in 2012 in the Vidharbha region of Maharashtra. The project was also continued in the Gulbarga district of the adjoining state Karnataka. Overall 25 acres are brought under the project.

Cheminova India is looking at the prospects of conserving rain water for growing better crops in rainfed agriculture. Under the Aakash Ganga project Cheminova India had implemented the initiative in farmers holdings to demonstrate simple techniques of water conservation.

'It is your water that goes down the drain. Save it to gain more' was the tag line adopted to highlight the problem among farmers. The project implemented in the pulse growing belt of Gulbarga was more than an eye-opener to many farmers.

#### The concept

We at Cheminova India wanted to do our best to raise awareness among farmers on water wastage and to demonstrate how water could be conserved to make

a difference in rain fed agriculture. It is easy to capture rain water and 'store it in subsoil' for later use. Simple cost-effective methods of plowing trenches across the fields were demonstrated for the farmers helping them to understand and adopt this technique so they can grow a successful crop and harvest a decent return in times of scanty rain. (Read more about the prospects of conserving water in rainfed agriculture on our website).

#### A well known Professor of water conservation participates

The concept explained to the growers was very much appreciated. Halfway through the crop growth period, we invited Prof. Ayyappa Masagi (known as 'Water Gandhi'), the father of this concept, to share his success stories from other states of India with farmers in Karnataka.

The growers were very happy and thankful for us bringing in Prof. Masagi for interaction and future guidance on the water conservation technique. The participants were convinced with the concept of Aakash Ganga and assured to take it forward by implementing the concept in their farm next year on a larger scale.

Cheminova also acknowledged Mr. Ayyappa Masagi for his contribution towards water conservation in Agriculture.



#### The SAHELI project

The women empowerment project has been continued and as planned the project has been extended with five villages.

Further information on this type of project can be found on our website [www.cheminova.com](http://www.cheminova.com).





# Successful launch of a new banana project in Brazil

By using Cheminova's low cost and simple precision technology it is possible to apply a few drops of a systemic fungicide to each banana plant and thereby reduce the environmental impact in sensitive areas.

## New project in an environmentally sensitive area

Last years heavy flooding in the Vale do Rebeira in the Sao Paulo State caused a set back for implementation of the planned banana project. In cooperation with the local banana farmers association ABAVAR the project has been initiated in 2012 and is running well. Vale do Rebeira has a very large production of bananas and it is situated in an area where the authorities consider it very important that agriculture and the natural environment should coexist to the benefit of the future generations.

### The project helps to solve an environmental problem

The primary objective of the project is to address an environmental problem in cooperation with professional farmers many of which grow more than 20 hectares of banana.

The challenge for the farmers of this area is the following: Sprays from aeroplanes are not allowed near houses, roads and environmentally sensitive areas near rivers and streams. Yet the banana plants

still need to be protected also in these areas.

Aerial spraying by professional application companies is the preferred way to control the plant diseases yellow and back sigatoka in the fields. The latter is a devastating disease that in worst case can destroy a whole banana plantation.

### Cheminova provides an environmentally safe alternative

Cheminova's simple hand held precision equipment is a tool suitable for application in areas where all other methods fail from an environmental point of view.

The project has the support of several local stakeholders including the largest aerial spray company whose management sees the need for an effective control method for sensitive areas. The project thus had a good start, and the plan is to further expand the activities in cooperation with local stakeholders for the benefit of the environment, the farmers and our business.



With a new technology, it is possible to protect banana plants close to streams.





## Banana projects in Brazil, continued

### Progress with small scale farmers in the state of Goiás

In the village Bureti Alegre we assist a group of farmers with safe and effective control of banana disease with the same technology as mentioned above. The project has focus on safe and effective application of the fungicide flutriafol which is a method recommended by the local authorities. In terms of disease control the project works very well although weak organisational capacity among the local farmers calls for a stronger organisation to bring the project further forward.

#### Dialogue with ministry of Agriculture

To further promote the project we have recently opened a dialogue with the Secretary of Agriculture of Goiás State. The technical experts under the ministry have already endorsed the application method for flutriafol and it is now discussed how to further increase the farmers benefit from banana production. Several additional initiatives such as improving quality and establishing certification of origin as well as other activities to support local farming are being discussed. (Read more on the governmental website: [www.se-agro.go.gov.br](http://www.se-agro.go.gov.br)).



Local dealers are engaged in the project with the new, simple technology.



# Production

We are constantly working on improving environment, health and safety at all production sites.

Data pertaining to environment, health and safety for these plants are shown in the fact box on page 31. Approximately one half of the activities measured as production costs (COGS) for all manufacturing plants take place in Denmark, approximately one third at the plant in India. All manufacturing plants are included in the statements for 2010, 2011 and 2012.

Detailed information for the other companies, which are included in the statement, may be found at [www.cheminova.com](http://www.cheminova.com), where the CSR accounting policy which has been used for the statements also can be found.

The significant discharges of treated waste water are from the manufacturing sites in Denmark and India, where the recipients are the North Sea and the Gulf of Khambat, respectively.

An authorized disposal site for chemical waste is situated at Cheminova's manufacturing site at Rønland in Denmark. The disposal holds remnants of sulfur, sand and concrete, which contain low concentrations of organophosphate chemicals and mercury. Cheminova has an agreement from 2010 with the Danish Environmental Protection Agency about removal of the disposal site over a certain period of time. The removal procedure was initiated in 2010 and is expected to be completed at the turn of the year 2013-14.

## The Cheminova group owns the following manufacturing plants

Name	Production	Country	Location
Cheminova A/S	Chemical synthesis, formulation and packaging	Denmark	Rønland, Lemvig
Cheminova India Ltd.	Chemical synthesis, formulation and packaging	India	Panoli north of Mumbai
Stähler / Cheminova Deutschland	Formulation and packaging	Germany	Stade west of Hamborg
Althaller Italia	Formulation and packaging	Italy	San Colombano, south of Milano
Headland Agrochemicals Ltd.	Formulation and packaging	United Kingdom	Deeside, North Wales
Cheminova MFG Pty. Ltd.	Formulation and packaging	Australia	Wyong north of Sydney

## Reduced energy consumption and environmental improvements

The majority (97%) of the energy consumption by Cheminova's manufacturing plants is related to the sites in Denmark and India, where active substances for plant protection products are manufactured by chemical synthesis. These processes are highly energy demanding and the major part of the steam and electricity consumption is produced with natural gas as energy source, the remaining part with other types of fuel, primarily oil.

Late 2012 Cheminova India commissioned a facility, where biofuel in the form of briquettes of compressed groundnut shells are used to partially replace natural gas in production of process steam. This kind of CO<sub>2</sub> neutral biomass has several advantages. Besides being more environmentally friendly due to reduced emission of greenhouse gasses, the project has a positive impact on the farmers' financial situation, since a new product has been created out of the waste from groundnut production. This is entirely in line with Cheminova's slogan: 'Helping you grow', where we help farmers increase the quality and yield of their crops

by means of our plant protection products, and furthermore help them make a business out of their waste.

We are continuously working on improvements within the areas of energy and environment at the production plants. It may be through reduction of various emissions, reduction of energy consumption or improved recovery of chemicals as an alternative to incineration.

As an example, Cheminova India has in cooperation with the local environmental authorities and other experts during 2012 designed, constructed and initiated a facility for recovery of acetic acid in relation to the production of the insecticide acephate. The aim of the project is reduction of a byproduct arising from neutralization of acetic acid with ammonia. The first experiments demonstrate a recovery of approximately 60-65% of the acetic acid, which has resulted in a significant reduction of both the byproduct and the consumption of ammonia.

## REACH - EU's chemicals regulation

The registration of chemicals according to the EU chemical regulation REACH has



## Production, continued

progressed far into stage 2, which is running until the middle of 2013. This stage includes chemicals, which the companies produce or import in volumes of more than 100 metric tons per year. In 2012 Cheminova had special focus on registration of flotation chemicals, which are used in the mining industry for separation of metals from the ore after crushing. These flotation chemicals are produced at Cheminova's plant in Denmark.

### Follow-up on targets for 2012

In the following, the targets are stated with the degree to which they have been fulfilled.

#### India

- The energy consumption for the production of three large products to be reduced by 3% per produced volume.

*Comments:* The energy consumption was reduced by 11.6% thus the target was achieved.

- The frequency and seriousness of incidents and accidents at work to be reduced by 5%

*Comments:* In 2012 there was no reportable accidents. The frequency rate of non reportable incidents was reduced by 40% and the seriousness rate by 10%. In this way the target was achieved.

- Certification of the production at the Intermediate Division to be certified in 2013 according to ISO 14001 and OHSAS 18001.

*Comments:* The work towards certification has proceeded as planned, and the certificates are expected to be received in 2013.

#### Denmark

- Re-certification of the company's environmental management system according to ISO 14001 and OHSAS 18001.

*Comments:* The audit of the certification company was accomplished in September. The audit resulted in 4 minor discrepancies. These were sub-

## Biomass used as alternative fuel in boilers

Mr. Pramod Dudhe

Late Mr Pramod Dudhe was managing an innovative Cheminova India project for the use of groundnut shells as an alternative source of energy. Mr. Dudhe passed away in 2013, his outstanding efforts for making this project a success are highly acknowledged.



### Facts about biomass as a fuel

Biomass briquettes may be used to substitute for coal and natural gas in production of steam and electricity.

The briquettes are mostly made of green waste and various organic materials. The briquettes are easily transported.

The use of biomass briquettes reduces the fuel costs, and reduces the emission of greenhouse gasses.

Cheminova's project with biomass as an alternative fuel supports our tagline: "Cheminova – Helping you grow". Our plant protection products improve quality and yield of the farmers' crops, and by encouraging the use of crop residues for energy production we provide an additional source of income.

sequently closed, and the certificates were renewed and thus the target was achieved.

- Certification of the company's energy management system according to ISO 50001.

*Comments:* The audit by the certification company was accomplished in September which resulted in 2 minor non conformances. One of these concerning ISO 5001 and one concerning additional requirements from The Danish Energy Agency. The first was subsequently closed while an energy report for the production site as required by The Danish Energy Agency was not completed in time. Thus the target was partially achieved.

- The programme SAFE for education and training of employees in better attitudes and safer behaviour to be spread to the organisation during 2012-13.

*Comments:* It was our intention that at least 640 employees should be trained and at least 160 inspection rounds should be completed at the end of

2012. All in all 347 employees had been trained and 185 inspection rounds had been completed thus the target was partially achieved. The programme is continued with intensified focus on the values.

- The quantity of hazardous waste from production of a fungicide to be reduced by half.

*Comments:* The quantity of waste was reduced by 60% and thus the target was achieved.

- Energy consumption for the production of an insecticide to be reduced by 8%.

*Comments:* It has not been technically possible to reduce the energy consumption as expected.

#### Australia

- The water consumption in production cleaning processes to be minimized as part of the plant's water saving programme.

*Comments:* Tests have shown that the water saving programme can be accomplished but examinations of the





GMP (Good Manufacturing Practice) requirements are still outstanding thus the target was partially achieved. These examinations will be accomplished in 2013.

- It will be ensured that external contractors work in accordance with our demands on health, safety and environment.

*Comments:* In 2012, all servicemen received safety instructions. 86% accepted the demands. The remaining 14% are expected to accept during the 1st quarter of 2013. No servicemen are allowed to enter the production area without having accepted the conditions in the safety instructions.

#### Comments on the development from 2011 to 2012

After a fall in production, measured on the consumption of raw material, of 12% from 2010 to 2011 the production has increased by 5% from 2011 to 2012. In most of the group companies there have been larger changes in quantity and selection of products from 2011 to 2012. This has resulted in significant changes in several parameters.

**Note 1:** In India, the consumption of water for processes has increased as a result of larger production of two products while the consumption in Denmark has decreased.

**Note 2:** The increased production in Denmark has primarily been formulation and here there is no consumption of natural gas.

**Note 3:** Australia is now using LPG (Liquefied Petroleum Gas consisting of propane and butane). Therefore, LPG has become a new parameter.

**Note 4:** The increase is primarily due to changed activities in India.

**Note 5:** The change primarily comes from Denmark where the COD in the waste

#### Fact box: Environment, health and safety

		Unit	Note	2012	2011	2010
<b>Water consumption:</b>	Cooling	Million m <sup>3</sup>		29	31	34
	Processes and ord. consumption	Thousand m <sup>3</sup>	1	659	682	821
<b>Energy consumption:</b>	Natural gas	GWh	2	311	337	386
	LPG	MWh	3	0.048	0	0
	Electricity	GWh	4	70.6	67.2	76.9
	Fuel oil	GWh		1.8	2.7	1.8
<b>Materials:</b>	Raw mat. consump.	1000 tonnes		108	103	116
<b>Discharge of waste water:</b>	COD	Tonnes	5	148	206	289
	Nitrogen	Tonnes	6	22	31	16
	Phosphorus	Tonnes		7	9	9
<b>Air emissions:</b>	Particles	Tonnes	7	5.7	4.5	5.2
	CO <sub>2</sub>	1000 Tonnes	8	63	71	79
<b>Ordinary waste:</b>	Recycling	1000 Tonnes		3.0	3.7	3.3
	Incineration	1000 Tonnes	9	0.26	0.47	0.47
	Depositing	1000 Tonnes		17.9	15.8	21.1
<b>Hazardous waste:</b>	Recycling	Tonnes	10	1,760	580	145
	Incineration	1000 Tonnes	10+11	12.3	7.6	6,8
	Depositing	1000 Tonnes	12	4.9	2.28	2.39
<b>Spillage and waste:</b>		Number	13	10	19	70
<b>Accidents:</b>		Number		18	20	34
<b>Accident frequency:</b>		-		3.3	4.0	8.8
<b>Absence from work due to accidents:</b>		-		0.2	1.0	3.6

water has reduced by one third.

**Note 6:** Nitrogen primarily comes from the waste-water treatment plant in Denmark. After an unusually high value in 2011, the level is normal again.

**Note 7:** In Denmark, the production which caused the particle emission, is closed. However, in all years, primarily the activities in India have contributed.

**Note 8:** The CO<sub>2</sub> emission has been reduced significantly, among others because a waste-water stream in Denmark is no longer incinerated. The production has been stopped.

**Note 9:** In Denmark, a production which significantly contributed to the quantities is closed.

**Note 10:** In Germany, the quantities for recycling and incineration previously have been split according to a qualified estimate. Now the amounts are measured and the amount going into recycling has increased by a factor 6.5.

**Note 11:** In India, the quantity has increased significantly because a waste water stream from a new production is incinerated.

**Note 12:** In India the quantity is doubled due to a major cleaning of an effluent treatment plant.

**Note 13:** No companies have increased the number of spillages – most have reduced the number of spillages.



# Human Resources

Based on Cheminova's mission, vision and values a global HR strategy is being implemented.

-  We achieve ambitious goals
-  We are innovative
-  We decide and act
-  We recognize results
-  We are good corporate citizens

## The values are alive in the organisation

One of the goals in 2012 was more focus on our business values in Cheminova globally. Our values are to be known, understood and lived in all parts of the organisation. They are an important element in achieving Cheminova's overall strategic objectives. The values are to be an equal part of the company culture and everyday life to our mission and vision.

As part of ensuring the implementation, a story-telling booklet - of how the values being part of the everyday life - was composed. Our various sites and departments contributed with articles about situations of how we achieve ambitious goals, are innovative, decide and act, recognize results and are good corporate citizens. It is important, that all employees had the optimal benefit of reading the booklet, therefore it was published in English, Danish, German, Spanish, Portuguese and Russian and distributed to all employees.

To illustrate the link between the everyday business and the values, meetings have been held in various parts of the organisation. It was discussed how the individual sites/ departments meet the values and how to possibly adjust their

conduct to achieve a correlation between day-to-day work and the company values. Where considered necessary, action plans for improvements of the future conduct were agreed upon.

In the Danish part of the organisation spot inquiries have been sent to random employees during the year asking if our values are part of their everyday working life. The results show a satisfactory level of knowledge of our values.

In Australia, the values were used as tool for social fund raising. Here we have also honoured seven employees/teams for actively demonstrating our values in their work. This activity is itself meeting one of our values, i.e. recognizing results.

Cheminova's five values are not to be considered a completed project. In the future, we shall launch various events refreshing all employees' memories as to why we have the values and how we may continuously improve ourselves in accordance with our values.

## Global HR strategy

In 2012 an ambitious global HR strategy has been decided. It will support Chemi-

nova's overall strategic business objectives and consolidate the overall framework, policies, procedures and tools across frontiers. The strategy runs until the end of 2016, and its three focus areas are: attraction, development and retention.

The strategy outlines the HR activities to be given special focus in each of the years. To meet the strategy the building of a Global HR organisation has been initiated, including the employment of specialists in the individual focus areas and a HR Community consisting of the head of Global HR and one representative for each region and Denmark. The specialists are to create the framework for the HR activities to achieve the overall business objectives, and the Community members are to implement these activities in their regions respectively.

In 2013 the global focus will be on appraisals, organisation alignment, job classification and strategic recruitment.

## Additional internal HR activities in 2012

In 2012 we have established global procedures for the introduction of new employees to ensure that employees are



The employees in São Paulo in Brazil gathered for a value meeting where the value booklet was used for discussion.



well received and have a well-structured programme for their initial period with Cheminova. Basically, the program is developed by the employee's immediate manager. It is, however, mandatory that all new employees are introduced to our values and Code of Business Principles, either by written material or information meetings for new employees, which are held in various parts of our organisation.

Equally, we have in 2012 established a procedure where resigned employees are asked for input in order to improve the conditions for the remaining and future employees.

Nationally, various development and training programmes and seminars, individually or in teams, have been completed. The courses have covered finance and accounts, languages, project management and personal development etc. For instance in Brazil, special focus has been given to educating managers in various management principles, especially creating a joint culture and adapting to the company values.

### External HR activities in 2012

Cheminova has in 2012 participated in job fairs and given a number of company presentations at universities and business schools. We offer education and are external examiners at high-level education centres and hold committee and board positions at technical schools, academies, business schools and universities in order to contribute to the education of the future workforce. In India we instruct and support children in primary schools and contribute professionally to higher educational institutes to prepare the students for the worklife. Additionally, Cheminova India has presented an Award to the best university student to promote the research within agriculture.

Cheminova is also open for visitors. In Denmark, e.g., we have had more than 2,000 visitors; hereof inspiration visits for 125 primary school pupils, 102 upper secondary school pupils and numerous university and business academy students.

### Social responsibility

Cheminova being a large place of employment in the local community has a long-standing tradition of claiming social responsibility, which contributes to

the company being an attractive place to work for our current and future employees.

Our social responsibility is reflected in the following activities in Denmark: Cheminova assists 'maladapted' young persons by offering them placements and subsequently often a job opportunity. We employ persons from the surrounding communities in flexible jobs and do job testing for physically or mentally disabled persons. We are cooperating with the local job centres to assist long-term unemployed persons in getting back to the worklife.

In 2012 twelve trainees have participated in a 13-week program with tasks on equal terms with our permanent employees. It is our intention to proceed with such activities in the future and consequently find it appropriate that we have joined Code of Care, which is a Danish non-profit organisation aiming at increasing social responsibility.

### Update of the anti-corruption policy

Inspired by the British anti-corruption policy, the Bribery Act 2010, Cheminova's anti-corruption policy has been updated concerning facilitation payment.





## Human Resources, continued

In 2012 anti-corruption has been discussed by the management of the Russian organisation along the same lines as done earlier in other parts of the organisation.

### Whistleblower function

As part of our Code of Business Principles, Cheminova established a global Whistleblower function at the beginning of 2011.

We do not consider our Whistleblower function as a telltale system only but a system which secures that we can maintain a good reputation and reliability towards all our stakeholders.

Our internal Whistleblower committee consists of the heads of Corporate Communication, Global Human Resources and Safety, Health, Environment & Quality Management.

Our assessment is that our Whistle-blower function is well-functioning and confidence-inspiring. In 2012 we received six reports, which all have been treated professionally and closed with a reply to the blower.

For the time being we are working on engaging a new and impartial external collaborator, who has a 24-hour hotline and is able to respond to potential inquiries in several languages.



In Australia, seven employees/teams have been honoured for actively demonstrating our values in their work. Here, certificates are handed over.



In India, we give instruction and support to children in the primary school and professional input to high schools.



# Strategy and action plan







# CSR strategy

## Helping you Grow – Chemistry with Care

### 1. Introduction

Cheminova's systematic CSR work has been going on since 2006. Every year goals have been set for the coming year's work, and the focal point for communication has been the annual CSR report, issued as a separate part of the Auriga annual reporting. The first CSR report was issued for the year 2006.

The work has continually evolved, initially around phase-out of Class I products and subsequently village projects in India. Based on our experiences from the first years' CSR work we decided in 2012 to establish a more long-term strategy for the CSR activities for the coming years.

With input from several sides including our auditor on CSR, PwC, the present strategy was developed.

### 2. CSR strategy (Main Objective)

The foundation of our CSR work is based on legislation as well as globally recognized norms and standards for our industry and Cheminova's business principles, as outlined below:

For CSR strategy considerations, we have focused on the following from the above foundation: UN's Millennium Development Goal: Eradicate extreme poverty and hunger.

#### Cheminova's mission

We help improve quality of life for the world's population by supplying products that help farmers increase yields and quality of crops to satisfy the global demand for food, feed, fibre and energy.

#### Cheminova's value

We are good corporate citizens.

By helping farmers around the world to produce more and better food Cheminova contributes to alleviate hunger and poverty in the world. We do this by producing and selling plant protection products. These are biologically active substances designed to have special properties for controlling harmful insects, harmful fungi and weeds in the farmer's fields. The products may have unwanted side effects if not produced, handled

and used with care. It is our goal to continuously improve our products so that side effects are reduced. Further we will continue to improve conditions on safety, health and environment at our production sites and in general we will support that care is exercised in the life cycle from production to application.

Our main objective in the future CSR efforts can with the above background in mind be expressed by the following slogan:

**Helping you Grow – Chemistry with Care**

### 3. CSR committee

Cheminova's CSR Committee has the operational responsibility that the CSR strategy is followed.

The CSR Committee refers to Cheminova's Global Executive Committee (GEC).

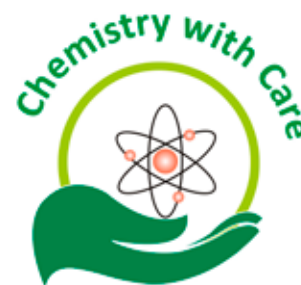
The CSR Committee consists of VP Safety, Health, Environment & Quality (Chairman), Manager Safety & Health (Secretary), Senior VP Production & Logistics, VP Human Resources, VP Portfolio Management and VP Corporate Communication.

### 4. Key focus areas

Based on our main objective 'Helping you Grow - Chemistry with Care', we have defined the following main areas. We will:

Globale standards	Industry standards	Our business principles
<ul style="list-style-type: none"> <li>UN Global Compact</li> <li>UN's Millennium Development Goals</li> <li>Global Reporting Initiative (GRI)</li> </ul>	<ul style="list-style-type: none"> <li>Responsible Care</li> <li>FAO Code of Conduct on the Distribution and Use of Pesticides</li> </ul>	<ul style="list-style-type: none"> <li>Cheminova's mission, vision and values</li> <li>Cheminova's Code of Business Principles</li> <li>Code of Conduct for suppliers</li> </ul>





- Help to increase food supplies through our product range.
- Reduce exposure to chemical products.
- Use fewer resources to manufacture our products.
- Contribute to CSR through our HR strategy.
- Continuously engage in demonstration projects under the heading 'Helping you grow'.

### 5. Target setting

Long-term goals will be set on the basis of:

- An index that illustrates the area of farmland where agricultural crops and thus food production is protected by Cheminova's plant protection products.
- An index illustrating the quantity of chemicals in Cheminova's plant protection products used per area protected.
- An index illustrating selected key resources used by Cheminova in the manufacturing of plant protection products.

**Note:** The indices are calculated relatively to reflect trends.

In relation to the development of these key indicators, it is important that they are based on validated data so that they can be documented, are reliable and can be recognized by our stakeholders.

The long-term goals are supported by specific targets in the following areas:

- Development of new formulations.
- Product stewardship.
- Demonstration projects in selected local areas.
- Attraction, development and retention of employees.
- Continuous improvement of our production facilities.
- Active supplier management.

### 6. Implementation

Setting targets is done by the CSR Committee through ongoing contact with representatives across the entire organisation (headquarters, regions and production sites), and external stakeholders.

Once goals are set, KPIs for each goal are prepared. The specific tasks are defined and progress is ensured by individuals being appointed by the CSR committee to assume responsibility for compliance and follow up on specific targets.

- The targets are presented to the GEC for final approval.

It is the responsibility of the CSR Committee to draw up reporting systems to ensure quarterly monitoring of CSR activities so that the work can be followed through the year.

### 7. Reporting of CSR

CSR is an important part of Cheminova's corporate identity and is communicated as such both internally and externally. The cornerstone of this communication is our annual CSR report which is at GRI level B and is including reporting according to UN Global Compact. The report is published together with Auriga's annual report. In addition CSR activities are highlighted in quarterly reports from Auriga as well as on our web page throughout the year. The internal communication is used to raise the awareness of our CSR activities in the global organization.

### 8. Revision of the strategy

The present strategy is on the agenda of the CSR Committee once a year in Q2, where proposals for revision are discussed and subsequently presented to GEC for final approval.

The overall CSR strategy is up for a thorough general review by the management every 3-5 years.

# Action plan

## Village projects

Focus area	Target/activity	Timetable	Success criteria
India	Intensification of the “Aakash Ganga” water conservation project	2013	Further 25 acres included in the project
	Continuation of the project “Saheli” on women empowerment on safety, health and livelihood	2013	Support on establishing self-help groups which based on local skills and education will be helped to improve their economy
	Impact assessment of village projects to be expanded with two project villages	2013	Two of the model villages to be covered by Impact Assessment Study. Exit plan for model villages
Brazil: Development of village community based on environmentally friendly control of banana diseases	The project among small-scale banana farmers in the state of Goiás will be continued and the dialogue with the Ministry of Agriculture to be continued	2013 - 14	The project keeps momentum, and dialog with the Ministry of Agriculture is continued
	The project with focus on safe and environmentally friendly control of plant diseases among banana farmers in the state of São Paulo will be continued	2013 - 14	The project keeps momentum and involves an increasing number of farmers

## Helping you Grow – Chemistry with Care

Focus area	Target/activity	Timetable	Success criteria
Chemistry with Care	Target: More plant protection Activity: An index illustrating the area of farm land where the crops and thus the food production is protected by Cheminova's products will be implemented	2013 -14	In the CSR report for 2013 reporting will be done based on a selected reference period. From 1st quarter 2014 and onwards reporting will be quarterly
	Target: Less chemistry Activity: An index illustrating the quantity of xenobiotics (not naturally occurring chemicals) applied in Cheminova's plant protection products per area unit will be implemented	2013-14	In the CSR report for 2013 reporting will be done based on a selected reference period. From 1st quarter 2014 and onwards reporting will be quarterly
	Target: Less resources Activity: An index illustrating the consumption of fossil fuel for manufacturing products at Cheminova's production sites in India and Denmark will be implemented	2013-14	In the CSR report for 2013 reporting will be done based on a selected reference period. From 1st quarter 2014 and onwards reporting will be quarterly
	Development of at least 20 formulations with a low content of volatile organic solvents	2012-14	Recipes filed at Cheminova A/S or Cheminova India Ltd
	Lower average toxicity of newly developed formulations measured through the classification of the formulation	2012-14	By each year the average WHO classification of newly developed formulations must be lower than the average classification of Cheminova's plant protection products. Only plant protection products, where the active ingredient is owned by Cheminova, are included

## Product stewardship

Focus area	Target/activity	Timetable	Success criteria
India	Target: Dispose empty containers in a safe and environmentally friendly manner	2013	Continued participation in the project being run in village Anantvarapadu

## Production

Focus area	Target/activity	Timetable	Success criteria
India	Energy consumption for the production of two large products to be reduced by 2% per produced volume	2013	Total energy consumption for production of the products reduced by at least 2% per produced volume compared to 2012
	Reduction of the COD content in the waste water by 3%	2013	COD content in the treated waste water reduced by at least 3% compared to 2012
	Frequency and seriousness of non reportable incidents at work to be reduced by 2%	2013	For incidents at work (i.e. incidents without absenteeism after 48 hours) frequency and absenteeism have been reduced by 2% compared to 2012
	The production at the Intermediate Division to be certified according to ISO 14001 and OHSAS 18001	2013	Certification company has forwarded confirmation of certification

Focus area	Target/activity	Timetable	Success criteria
Denmark	Revision of the operation of the biological waste water treatment plant where the waste water from the individual production plants is treated/optimized so that the potential of the plant is utilised in the best possible way	2012-15	Reduction of the consumption of resources for treatment of waste water from the individual production plants under continuous adherence to the discharge requirements to the biological treatment plant
	Target: To reduce the quantity of waste per produced unit and Cheminova's total costs for treatment of hazardous waste by 5 and 10% respectively per year in 3 years Activity: Examine waste flows to find out whether they can be divided more appropriate as regards characteristics and classification plus reassessment of demands for treatment	2012-14	Goal achievement is assessed on basis of the production in 2011. New productions and subsequent generation of waste will not be included in the calculation of goal achievement
Australia	Achieve an OHSAS 18001 certificate on occupational health and safety management	2014	Certification company has forwarded confirmation of certification
	Target: Improve waste-water treatment. Ensure compliance to trade waste water license Activity: 1) Apply for an increase in magnitude in discharge consent criteria 2) Understand current performance limitations and measurement criteria 3) Maximise performance of process and examine further treatment options	2013	Submission to Council of appropriately structured approval
United Kingdom	Target: Reassessment of environmental and safety performance to meet the high standard Activity: Application of a Hazardous Substance Consent and a new be-spoke environmental permit plus submitting a COMAH report to the competent authorities	2013	Applications approved and the safety level of the site accepted by the competent authorities
Germany	Target: Reducing the emission of dust from a production plant Activity: Installation and commissioning of a new dust filter	2013	The concentration of dust emitted is below 2 mg/m <sup>3</sup>

### Supplier management

Focus area	Target/activity	Timetable	Success criteria
Supplier audit	Target: Ensure high quality of supplier audit with focus on CSR related issues Activity: Education and training of supplier auditors worldwide	2013	Accomplished training of Supply Chain staff, technical responsible persons in the regions and other relevant employees

### Human Resources

Focus area	Target/activity	Timetable	Success criteria
Attraction	A global policy and procedure describing how Cheminova can attract the best match for each vacant and/or new positions is to be established	2013	A global policy to be issued and procedure for strategic recruitment to be initiated
Development	Completion of yearly appraisals for all employees globally. In addition, we shall develop a new appraisal set-up which will be linked to the company's KPIs and values.	2013-14	All employees have participated in minimum one appraisal in 2013
Retention	To establish visible and successful career paths globally, and title and benefit structure is aligned according to roles and responsibilities of the specific positions.	2013	All management and key positions to be evaluated and job classified. Roles and responsibilities are to be defined for each position. Global policy for career paths to be issued and communicated throughout the entire organisation
Anti-corruption	Mapping from which a classification of country based corruption risks can be made. Educational activity for selected employees	2013-14	GEC approval of mapping. Educational activities for selected employees has been undertaken
Denmark	Target: To improve job satisfaction and innovation, and also to reduce mistakes and unintended incidents Activity: Starting from Cheminova's values employees are educated and trained in understanding colleagues' job functions, interactions on the organisation and care in time	2013	By the end of 2013 all employees has been educated and involved in the SAFE programme



# More information



# Management statement



  
Kurt Pedersen Kaalund  
President & CEO



  
Anton Bro  
Senior Vice President,  
Development & Registration



  
Rico T. Christensen  
President,  
Region North America



  
Jaime Gomez-Arnau  
President,  
Region Europe




  
Niels Morten Hjort  
Senior Vice President,  
Production & Logistics




  
Jesper Barslund Jacobsen  
Senior Vice President,  
Finance & Support



  
Pramod N. Karlekar  
President,  
Region International



  
Berit Nørskou Pedersen  
Vice President,  
Human Resources


On March 1, 2013, the company's day-to-day management, the Global Executive Committee (GEC), considered and approved the CSR Report for 2012.

Cheminova's CSR work is founded on FN's Global Compact and GRI (Global Reporting Initiative) which are internationally approved codes together with Responsible Care which is the chemical industry's own code. Internally, The CSR work is rooted in Cheminova's Code of Business Principles and the CSR Strategy as well as policies and procedures in our Global QC and CSR Manual.


GEC has the overall responsibility for Cheminova's global business and activities, including CSR.

It is the GEC's view that the CSR Report for 2012 provides an accurate picture of the company's CSR activities in the areas described.



  
Cesar Rojas  
President,  
Region Latin America



  
Jens Thorsen  
Vice President,  
Portfolio Management

# Assurance statement

## Independent Assurance Statement for Cheminova A/S's stakeholders

We have assessed Cheminova A/S's 2012 CSR Report for the purpose of expressing a conclusion on the descriptions of target attainment and non-financial data contained in the Report as well as its capacity as Communication on Progress Report (COP Report) occasioned by Cheminova A/S's signature to the UN Global Compact.

### Criteria applied

The criteria for CSR-related target attainment are stated in the 2011 CSR Report, in which targets as well as success criteria for the focus areas Village Projects, 'Helping you Grow – Chemistry with Care' Production, REACH – new EU's chemicals regulation, Supplier Management and Human Resources, are presented.

The criteria for preparation of non-financial data contained in the CSR Report are evident from the accounting policies described on our website: [http://www.cheminova.com/en/sustainability/data\\_and\\_summaries/csr\\_accounting\\_principles.htm](http://www.cheminova.com/en/sustainability/data_and_summaries/csr_accounting_principles.htm). These contain information concerning which of the Group's businesses and activities are included in the types of data reported as well as Management's reasons for selecting environmental and occupational health and safety data.

### Responsibilities

Cheminova A/S Management is responsible for preparing the CSR Report, including for setting up registration and internal control systems with a view to ensuring reliable reporting. Company Management is furthermore responsible for specifying acceptable reporting criteria as well as selecting data to be collected.

Moreover, Cheminova A/S Management is responsible for preparing a COP Report presenting Cheminova A/S's progress in respect of supporting the UN Global Compact principles.

Our responsibility is, on the basis of our work, to express a conclusion on the information contained in the CSR Report regarding target attainment and non-financial data as well as on the Report as a COP Report.

### Scope of our work

We planned and performed our work in accordance with the International Audit-ing Standard ISAE 3000 (assurance engagements other than audits or review of historical financial information) for the purpose of obtaining moderate assurance that

- the status of attainment of established CSR targets for 2012 on page 5 is in accordance with the listed criteria for CSR targets, which were published in the 2011 CSR Report;
- the environmental and occupational health and safety data stated on page 31 have been recognised in accordance with the criteria stated for preparation of the non-financial data of the CSR Report;
- the CSR Report in its entirety is consistent with the Company's CSR activities and progress with a view to supporting the UN Global Compact.

The assurance obtained is limited as compared to that of an audit. Our work has therefore, based on an assessment of materiality and risk, primarily included inquiries concerning goal attainment, including on a judgemental sample-basis obtaining documented confirmations regarding goal attainment from local managements, interviews with selected key managerial employees responsible for the goal attainment and review of selected documentation.

Moreover, our review of local targets and data has included visits to the production companies in India, England and Denmark, and we paid visit to the sales company in India.

The criteria stated concerning statement of environmental and occupational health and safety data, as described in the accounting policies, have primarily been assessed from inquiries concerning procedures for calculation and measurement of the concrete data. Furthermore, we have performed technical accounting analyses of reported data and have reviewed selected documentation.

We have reviewed the Report with a view to assessing its informative value in relation to expectations for a COP Report. Through interviews with Management and selected key employees, we have gained insight into Management's commitment and status of embedding of the UN Global Compact and Cheminova A/S's values with relating specific activities.

As agreed with Cheminova A/S Management, we have not performed any procedures relating to the reliability of the GRI reporting for 2012.

### Conclusion

Based on our review, nothing has come to our attention that causes us to believe that the descriptions covering the status of the attainment of CSR targets for 2012 on page 5 are not accurate.


Furthermore, nothing has come to our attention that causes us to believe that the environmental and occupational health and safety data stated on page 31 have not been recognised in accordance with the criteria stated for preparation of the non-financial data of the CSR Report.

We confirm that the CSR Report serve as Cheminova A/S's COP Report, and based on the total work performed, nothing has come to our attention that causes us to believe that the CSR Report in its entirety is not based on specific activities and thus Cheminova A/S's progress with a view to supporting the UN Global Compact.


Copenhagen, March 15, 2013

**PricewaterhouseCoopers**

Statsautoriseret Revisionspartnerselskab



Birgitte Mogensen  
State Authorised Public Accountant



Jens Pultz Pedersen  
MSc (Engineering), Diploma (Business Economics)



# UN Global Compact

## Progress report on the implementation of the principles of the UN Global Compact.

Cheminova has supported the United Nations Global Compact since 2009. We support the endeavors to make globalization more socially and ecologically compatible and to raise standards in the fields of human rights, labour rights and environmental protection and in the fight against corruption. The following table shows the activities and management systems

at Cheminova that support the 10 principles of the Global Compact and the results which were achieved in the period under review. Information on the Global Compact can be found at [www.unglobalcompact.org](http://www.unglobalcompact.org).

The page numbers refer to relevant sections of this report.

Systems	Measures 2012	Achievements 2012
<b>Human Rights:</b>		
Principle 1: Support of human rights		
Principle 2: Exclusion of human rights violations		
<ul style="list-style-type: none"> <li>• Code of Business Principles (p. 49)</li> <li>• Supplier Code of Conduct (p. 49)</li> <li>• Management approach to CSR management (p. 49)</li> </ul>	<ul style="list-style-type: none"> <li>• In 2012, the knowledge of the company's mission, vision and values among all employees of the group will be spread and maintained</li> <li>• In 2012, a global HR strategy will be prepared in order to ensure increased and more structured focus on Human Resources in the total group</li> <li>• The project "Saheli" on women empowerment on safety, health and livelihood in India will be continued in 2012 and extended with further 5 villages</li> </ul>	<ul style="list-style-type: none"> <li>• Executed (p. 6)</li> <li>• Executed (p. 6)</li> <li>• Executed (p. 5)</li> </ul>
<b>Labour Standards:</b>		
Principle 3: Observance of the right to freedom of association		
Principle 4: Abolition of all forms of forced labour		
Principle 5: Abolition of child labour		
Principle 6: Elimination of discrimination		
<ul style="list-style-type: none"> <li>• Code of Business Principles (p. 49)</li> <li>• Supplier Code of Conduct (p. 49)</li> <li>• Management approach to CSR management (p. 49)</li> <li>• UN Code of Conduct (p. 49)</li> </ul>	<ul style="list-style-type: none"> <li>• In 2012, the knowledge of the company's mission, vision and values among the employees of the group will be spread and maintained</li> <li>• In 2012, a global HR strategy will be prepared in order to ensure increased and more structured focus on Human Resources in the total group</li> <li>• Production at the Intermediate Division in India will in the period 2012-13 be certified in relation to OHSAS 18001</li> </ul>	<ul style="list-style-type: none"> <li>• Executed (p. 6)</li> <li>• Executed (p. 6)</li> <li>• Executed (p. 6)</li> </ul>

Systems	Measures 2012	Achievements 2012
<b>Environment:</b> Principle 7: Precautionary environmental protection Principle 8: Specific commitment to environmental protection Principle 9: Diffusion of environmentally friendly technologies		
<ul style="list-style-type: none"> <li>• Code of Business principles (s. 49)</li> <li>• Responsible Care (p. 49)</li> <li>• Supplier Code of Conduct (p. 49)</li> <li>• Management approach to CSR management (p. 49)</li> <li>• UN Code of Conduct (p. 49)</li> </ul>	<ul style="list-style-type: none"> <li>• In India, the project "AAkash Ganga" on water conservation will be continued in 2012 and extended with further 25 acres</li> <li>• The project among small-scale banana farmers in the state of Goiás in Brazil will be continued in 2012</li> <li>• A new project on community development and safe and environmentally friendly control of plant diseases will be launched among small-scale banana farmers in the state of São Paulo in Brazil in 2012</li> <li>• The production at the Intermediate Division in India will in 2012-13 be certified in relation to ISO 14001</li> <li>• The energy consumption for the production of 3 large products in India will in 2012 be reduced by 3% per produced volume</li> <li>• The quantity of hazardous waste from the production of a fungicide in Denmark will be halved</li> <li>• In the period 2012-14 at least 20 formulations with low content of volatile organic solvents will be developed</li> </ul>	<ul style="list-style-type: none"> <li>• Executed (p. 5)</li> <li>• Executed (p. 5)</li> <li>• Implementation plan is followed (p. 5)</li> <li>• Executed (p. 6)</li> <li>• Executed (p. 5)</li> <li>• Executed (p. 6)</li> <li>• Executed (p. 5)</li> </ul>
<b>Anti-Corruption:</b> Principle 10: Measures to fight corruption		
<ul style="list-style-type: none"> <li>• Code of Business principles (s. 49)</li> <li>• Management approach to CSR management (p. 49)</li> </ul>	<ul style="list-style-type: none"> <li>• Anti corruption policy updated</li> <li>• Dialogue with subsidiaries</li> </ul>	<ul style="list-style-type: none"> <li>• Executed (p. 33)</li> <li>• Executed (p. 34)</li> </ul>
<b>General CSR Issue</b>		
<ul style="list-style-type: none"> <li>• Code of Business principles (s. 49)</li> <li>• Responsible Care (p. 49)</li> <li>• UN Code of Conduct (p. 49)</li> </ul>	<ul style="list-style-type: none"> <li>• The already initiated projects in the nine selected villages in India will be continued in 2012 and 2013</li> <li>• Impact assessments and implementation of specific improvements identified will be undertaken in two villages in India</li> </ul>	<ul style="list-style-type: none"> <li>• Plan followed (p. 5)</li> <li>• Plan followed (p. 25)</li> </ul>

# GRI reporting 2012

The page numbers refer to the relevant sections of this report, and AR refers to page numbers in Auriga's Annual Report 2012.

F = Fully reported; P = Partly reported.



	Information about the company	Links and comments		Page
<b>1. Strategy and analysis</b>				
1.1	Statement from the president, CEO and the Global Executive Committee	<a href="http://www.cheminova.com/download/about_us/aurigaindustries_annualreport2012_uk.pdf">http://www.cheminova.com/download/about_us/aurigaindustries_annualreport2012_uk.pdf</a> - AR 2012 p. 3	F	3 and 41
1.2	Description of essential impacts, risks and opportunities	<a href="http://www.cheminova.com/download/about_us/aurigaindustries_annualreport2012_uk.pdf">http://www.cheminova.com/download/about_us/aurigaindustries_annualreport2012_uk.pdf</a> - AR 2012 p. 17	F	12 and 14
<b>2. Organisational profile</b>				
2.1	Name of the organization	-	F	1
2.2	Primary brands, products, and/or services	<a href="http://www.cheminova.com/en/products__innovation/products__innovation.htm">http://www.cheminova.com/en/products__innovation/products__innovation.htm</a>	F	9
2.3	Operational structure of the organization, including main divisions, operating companies, subsidiaries, and joint ventures	<a href="http://www.cheminova.com/en/about_us/management_and_structure/organisation.htm">http://www.cheminova.com/en/about_us/management_and_structure/organisation.htm</a>	F	-
2.4	Location of organization's headquarters	-	F	52
2.5	Number of countries where the organization operates, and names of countries with either major operations or that are specifically relevant to the sustainability issues covered in the report	<a href="http://www.cheminova.com/en/about_us/management_and_structure/organisation.htm">http://www.cheminova.com/en/about_us/management_and_structure/organisation.htm</a> <a href="http://www.cheminova.com/en/contact/worldwide/worldwide.htm">http://www.cheminova.com/en/contact/worldwide/worldwide.htm</a>	F	-
2.6	Nature of ownership and legal form	<a href="http://www.cheminova.com/en/about_us/management_and_structure/organisation.htm">http://www.cheminova.com/en/about_us/management_and_structure/organisation.htm</a>	F	-
2.7	Markets served	<a href="http://www.cheminova.com/download/about_us/aurigaindustries_annualreport2012_uk.pdf">http://www.cheminova.com/download/about_us/aurigaindustries_annualreport2012_uk.pdf</a> - AR 2012 p. 10 and 12 <a href="http://files.shareholder.com/downloads/ABEA-4AAEQR/2284666904x0x594485/51bf6c6e-4fe0-449b-bfc6-2e965cc790d8/Corporateprofile_OurMarket_UK.pdf">http://files.shareholder.com/downloads/ABEA-4AAEQR/2284666904x0x594485/51bf6c6e-4fe0-449b-bfc6-2e965cc790d8/Corporateprofile_OurMarket_UK.pdf</a>	F	10
2.8	Scale of the reporting organization	<a href="http://www.cheminova.com/download/about_us/aurigaindustries_annualreport2012_uk.pdf">http://www.cheminova.com/download/about_us/aurigaindustries_annualreport2012_uk.pdf</a> - AR 2012 p. 5 and notes p. 37-64	F	-
2.9	Significant changes during the reporting period regarding size, structure, or ownership	<a href="http://www.cheminova.com/download/about_us/aurigaindustries_annualreport2012_uk.pdf">http://www.cheminova.com/download/about_us/aurigaindustries_annualreport2012_uk.pdf</a> - AR 2012 p. 6	F	4
2.10	Awards received in the reporting period	-	F	10 and 16
<b>3. Report parameters</b>				
<b>Aspect: Report profile</b>				
3.1	Reporting period for information provided	<a href="http://www.cheminova.com/en/sustainability/data_and_summaries/csr_accounting_principles.htm">http://www.cheminova.com/en/sustainability/data_and_summaries/csr_accounting_principles.htm</a>	F	4
3.2	Date of most recent previous report	March 14, 2012	F	-
3.3	Reporting cycle	<a href="http://www.cheminova.com/en/sustainability/data_and_summaries/csr_accounting_principles.htm">http://www.cheminova.com/en/sustainability/data_and_summaries/csr_accounting_principles.htm</a>	F	-
3.4	Contact point for questions regarding the report or its contents	-	F	2
<b>Aspect: Report scope and boundary</b>				
3.5	Process for defining report content	-	F	4
3.6	Boundary of the report	-	F	4 and 29
3.7	Limitations on the scope or boundary of the report.	-	F	4 and 29
3.8	Basis for reporting on joint ventures, subsidiaries, leased facilities, outsourced operations, and other entities that can significantly affect comparability from period to period and/or between organizations	n.a.	F	-



## GRI reporting 2012, continued

	Information about the company	Links and comments		Page
3.9	Data measurement techniques and the bases of calculations, including assumptions and techniques underlying estimations applied to the compilation of the indicators and other information in the report	<a href="http://www.cheminova.com/en/sustainability/csr_policy/management_approach_to_csr_management.htm">http://www.cheminova.com/en/sustainability/csr_policy/management_approach_to_csr_management.htm</a> <a href="http://www.cheminova.com/en/sustainability/data_and_summaries/csr_accounting_principles.htm">http://www.cheminova.com/en/sustainability/data_and_summaries/csr_accounting_principles.htm</a>	F	-
3.10	Explanation of the effect of any re-statements of information provided in earlier reports, and the reasons for such re-statement	n.a.	F	-
3.11	Significant changes from previous reporting periods in the scope, boundary, or measurement methods applied in the report	n.a.	F	-
3.12	Table identifying the location of the Standard Disclosures in the report	-	F	45
3.13	Verification	-	F	41 and 42
<b>4. Governance, commitments and engagement</b>				
<b>Aspect: Governance</b>				
4.1	Governance structure of the organization, including committees under the highest governance body responsible for specific tasks, such as setting strategy or organizational oversight	<a href="http://www.cheminova.com/en/about_us/management_and_structure/">http://www.cheminova.com/en/about_us/management_and_structure/</a>	F	41
4.2	Indicate whether the Chair of the highest governance body is also an executive officer	<a href="http://www.cheminova.com/en/about_us/management_and_structure/">http://www.cheminova.com/en/about_us/management_and_structure/</a> <a href="http://www.cheminova.com/en/about_us/management_and_structure/independence.htm">http://www.cheminova.com/en/about_us/management_and_structure/independence.htm</a>	F	-
4.3	For organizations that have a unitary board structure, state the number of members of the highest governance body that are independent and/or non-executive members	<a href="http://www.cheminova.com/en/about_us/management_and_structure/">http://www.cheminova.com/en/about_us/management_and_structure/</a>	F	-
4.4	Mechanisms for shareholders and employees to provide recommendations or direction to the highest governance body	-	F	21
4.5	Linkage between compensation for members of the highest governance body, senior managers, and executives (including departure arrangements) and the organisation's performance (including social and environmental performance)	<a href="http://www.cheminova.com/download/about_us/policy/vederlagspolitik_uk.pdf">http://www.cheminova.com/download/about_us/policy/vederlagspolitik_uk.pdf</a> <a href="http://www.cheminova.com/en/about_us/governance/report_on_corporate_governance.htm">http://www.cheminova.com/en/about_us/governance/report_on_corporate_governance.htm</a>	F	-
4.6	Processes in place for the highest governance body to ensure conflicts of interest are avoided	<a href="http://www.cheminova.com/en/about_us/governance/report_on_corporate_governance.htm">http://www.cheminova.com/en/about_us/governance/report_on_corporate_governance.htm</a>	F	-
4.7	Process for determining the qualifications and expertise of the members of the highest governance body for guiding the organisation's strategy on economic, environmental, and social topics	<a href="http://www.cheminova.com/en/about_us/governance/report_on_corporate_governance.htm">http://www.cheminova.com/en/about_us/governance/report_on_corporate_governance.htm</a>	F	-
4.8	Internally developed statements of vision, values, principles etc. and their implementation	<a href="http://www.cheminova.com/en/about_us/understanding_cheminova/">http://www.cheminova.com/en/about_us/understanding_cheminova/</a> <a href="http://www.cheminova.com/en/sustainability/csr_policy/code_of_business_principles.htm">http://www.cheminova.com/en/sustainability/csr_policy/code_of_business_principles.htm</a> <a href="http://www.cheminova.com/en/sustainability/csr_policy/supplier_code_of_conduct.htm">http://www.cheminova.com/en/sustainability/csr_policy/supplier_code_of_conduct.htm</a>	F	32 and 33
4.9	Procedures of the Board for overseeing the organisation's economic, environmental and social management and performance	<a href="http://www.cheminova.com/en/about_us/governance/report_on_corporate_governance.htm">http://www.cheminova.com/en/about_us/governance/report_on_corporate_governance.htm</a> <a href="http://www.cheminova.com/download/about_us/aurigainindustries_annualreport2012_uk.pdf">http://www.cheminova.com/download/about_us/aurigainindustries_annualreport2012_uk.pdf</a> - AR 2012 p. 20	F	-
4.10	Processes for evaluating the Boards own performance	<a href="http://www.cheminova.com/en/about_us/governance/report_on_corporate_governance.htm">http://www.cheminova.com/en/about_us/governance/report_on_corporate_governance.htm</a> <a href="http://www.cheminova.com/download/about_us/aurigainindustries_annualreport2012_uk.pdf">http://www.cheminova.com/download/about_us/aurigainindustries_annualreport2012_uk.pdf</a> - AR 2012 p. 20	F	-
<b>Aspect: Commitments to external initiatives</b>				
4.11	Explanation of whether and how the precautionary approach or principle is addressed by the organisation	-	F	3, 10, 12, 18 and 23
4.12	Externally developed economic, environmental, and social charters, principles, or other initiatives to which the organisation subscribes or endorses	-	F	4, 43 and 49
4.13	Memberships in associations	-	F	9 and 49
<b>Aspect: Stakeholder engagement</b>				
4.14	List of stakeholder groups engaged by the organizations	-	F	21
4.15	Basis for identification and selection of stakeholders with whom to engage	-	F	4 and 21

	Information about the company	Links and comments		Page
4.16	Approaches to stakeholder engagement, including frequency of engagement by type and by stakeholder group	There is a current and open dialogue with our stakeholders	F	21
4.17	Key topics and concerns that have been raised through stakeholder engagement, and how the organisation has responded	<a href="http://www.mst.dk/NR/rdonlyres/DDF068A0-2986-46F6-86C5-096249DAD5B2/0/Cheminova_VVM_udvidelse.pdf">http://www.mst.dk/NR/rdonlyres/DDF068A0-2986-46F6-86C5-096249DAD5B2/0/Cheminova_VVM_udvidelse.pdf</a> Climate changes and potential harm from plant protection products are focus areas among our stakeholders	F	12 and 14

	Indicators of company's CSR	Links		Page
<b>Economics</b>				
	Management approach	<a href="http://www.cheminova.com/en/about_us/governance/report_on_corporate_governance.htm">http://www.cheminova.com/en/about_us/governance/report_on_corporate_governance.htm</a> <a href="http://www.cheminova.com/download/about_us/aurigainindustries_annualreport2012_uk.pdf">http://www.cheminova.com/download/about_us/aurigainindustries_annualreport2012_uk.pdf</a>	F	-
<b>Aspect: Economic performance</b>				
EC1	Direct economic value generated and distributed, including revenues, operating costs, employee compensation, donations and other community investments, retained earnings, and payments to capital providers and governments	<a href="http://www.cheminova.com/download/about_us/aurigainindustries_annualreport2012_uk.pdf">http://www.cheminova.com/download/about_us/aurigainindustries_annualreport2012_uk.pdf</a> - AR 2012 p. 5 and notes p. 37-64	F	-
EC3	Coverage of the organization's defined benefit plan obligations	<a href="http://www.cheminova.com/download/about_us/aurigainindustries_annualreport2012_uk.pdf">http://www.cheminova.com/download/about_us/aurigainindustries_annualreport2012_uk.pdf</a> - AR 2012 p. 54-55 <a href="http://www.cheminova.com/download/about_us/policy/vederlagspolitik_uk.pdf">http://www.cheminova.com/download/about_us/policy/vederlagspolitik_uk.pdf</a>	F	-
<b>Aspect: Market presence</b>				
EC7	Procedures for local hiring and proportion of senior management hired from the local community at locations of significant operation	<a href="http://www.cheminova.com/download/sustainability/gri_indikatorer_hr_omraadetuk.pdf">http://www.cheminova.com/download/sustainability/gri_indikatorer_hr_omraadetuk.pdf</a>	F	-
<b>Environment</b>				
	Management approach	<a href="http://www.cheminova.com/en/sustainability/csr_policy/management_approach_to_csr_management.htm">http://www.cheminova.com/en/sustainability/csr_policy/management_approach_to_csr_management.htm</a>	F	-
<b>Aspect: Materials</b>				
EN1	Materials used by weight or volume	-	F	31
<b>Aspect: Energy</b>				
EN3	Direct energy consumption by primary energy source	Natural gas 311 GWh corresponding to 1120 TJ (Terra joule) LPG 0.048 MWh corresponding to 0.17 GJ (Giga joule) Fuel oil 1.8 GWh corresponding to 6.5 TJ	F	31
EN4	Indirect energy consumption by primary source	Elektricitet 70.6 GWh corresponding to 254.2 TJ	F	31
<b>Aspect: Water</b>				
EN8	Total water withdrawal by source	-	F	31
<b>Aspect: Biodiversity</b>				
EN11	Location and size of land owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas	<a href="http://www.cheminova.com/en/about_us/news_views/production_sites_and_natural_resorts.htm">http://www.cheminova.com/en/about_us/news_views/production_sites_and_natural_resorts.htm</a> <a href="http://www.cheminova.com/en/about_us/news_views/biodiversity.htm">http://www.cheminova.com/en/about_us/news_views/biodiversity.htm</a>	F	-
EN12	Description of significant impacts of activities, products, and services on biodiversity in protected areas and areas of high biodiversity value outside protected areas	<a href="http://www.cheminova.com/en/about_us/news_views/production_sites_and_natural_resorts.htm">http://www.cheminova.com/en/about_us/news_views/production_sites_and_natural_resorts.htm</a> <a href="http://www.cheminova.com/en/about_us/news_views/biodiversity.htm">http://www.cheminova.com/en/about_us/news_views/biodiversity.htm</a>	F	-
<b>Aspect: Emissions, effluents and waster</b>				
EN16	Total direct and indirect greenhouse gas emissions by weight	<a href="http://www.cheminova.com/en/sustainability/data_and_summaries/csr_accounting_principles.htm">http://www.cheminova.com/en/sustainability/data_and_summaries/csr_accounting_principles.htm</a>	F	31
EN21	Total water discharge by quality and destination	-	F	31
EN22	Total weight of waste by type and disposal method	-	F	31
EN23	Total number and volume of significant spills	-	P	31
<b>Aspect: Products and services</b>				
EN26	Initiatives to mitigate environmental impacts of products and services, and extent of impact mitigation	<a href="http://www.cheminova.com/en/about_us/news_views/safety_and_health.htm">http://www.cheminova.com/en/about_us/news_views/safety_and_health.htm</a>	F	10 and 12







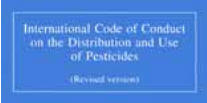



## GRI reporting 2012, continued

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Labour practices and decent work				
	Management approach	<a href="http://www.cheminova.com/en/sustainability/csr_policy/management_approach_to_csr_management.htm">http://www.cheminova.com/en/sustainability/csr_policy/management_approach_to_csr_management.htm</a>	F	21
Aspect: Occupational health and safety				
LA7	Rates of injury, occupational diseases, lost days, and absenteeism, and number of work-related facilities by region	Only for manufacturing companies	D	31
LA8	Education, training, counselling, prevention, and risk-control programmes in place to assist workforce members, their families, or community members regarding serious diseases	<a href="http://www.cheminova.com/download/sustainability/gri_indikatorer_hr_omraadetak.pdf">http://www.cheminova.com/download/sustainability/gri_indikatorer_hr_omraadetak.pdf</a>	F	24
Human Rights				
	Management approach	<a href="http://www.cheminova.com/en/sustainability/csr_policy/management_approach_to_csr_management.htm">http://www.cheminova.com/en/sustainability/csr_policy/management_approach_to_csr_management.htm</a>	F	34 and 49
Aspect: Freedom of association and collective bargaining				
HR5	Operations identified in which the right to exercise freedom of association and collective bargaining may be at significant risk, and actions taken to support these rights	<a href="http://www.cheminova.com/download/sustainability/gri_indikatorer_hr_omraadetak.pdf">http://www.cheminova.com/download/sustainability/gri_indikatorer_hr_omraadetak.pdf</a> <a href="http://www.cheminova.com/en/sustainability/csr_policy/management_approach_to_csr_management.htm">http://www.cheminova.com/en/sustainability/csr_policy/management_approach_to_csr_management.htm</a>	F	-
Aspect: Child labour				
HR6	Operations identified as having significant risk for incidents of child labour, and measures taken to contribute to the elimination of child labour	<a href="http://www.cheminova.com/download/sustainability/gri_indikatorer_hr_omraadetak.pdf">http://www.cheminova.com/download/sustainability/gri_indikatorer_hr_omraadetak.pdf</a> <a href="http://www.cheminova.com/en/sustainability/csr_policy/management_approach_to_csr_management.htm">http://www.cheminova.com/en/sustainability/csr_policy/management_approach_to_csr_management.htm</a>	F	-
Aspect: Forced and compulsory labour				
HR7	Operations identified as having significant risk for incidents of forced or compulsory labour, and measures to contribute to the elimination of forced or compulsory labour	<a href="http://www.cheminova.com/download/sustainability/gri_indikatorer_hr_omraadetak.pdf">http://www.cheminova.com/download/sustainability/gri_indikatorer_hr_omraadetak.pdf</a> <a href="http://www.cheminova.com/en/sustainability/csr_policy/management_approach_to_csr_management.htm">http://www.cheminova.com/en/sustainability/csr_policy/management_approach_to_csr_management.htm</a>	F	-
Society				
	Management approach	<a href="http://www.cheminova.com/en/sustainability/csr_policy/management_approach_to_csr_management.htm">http://www.cheminova.com/en/sustainability/csr_policy/management_approach_to_csr_management.htm</a>	F	10 and 49
Aspect: Community				
S01	Impacts of operations on communities, including entering, operating, and exiting	-	F	21
Aspect: Corruption				
S03	Percentage of employees trained in organisation's anti-corruption policies and procedures	<a href="http://www.cheminova.com/en/sustainability/csr_policy/management_approach_to_csr_management.htm">http://www.cheminova.com/en/sustainability/csr_policy/management_approach_to_csr_management.htm</a>	P	-
Aspect: Public policy				
S05	Public policy positions and participation in public policy development and lobbying	-	F	21
Product responsibility				
	Management approach	<a href="http://www.cheminova.com/en/sustainability/csr_policy/management_approach_to_csr_management.htm">http://www.cheminova.com/en/sustainability/csr_policy/management_approach_to_csr_management.htm</a>	F	49
Aspect: Customer health and safety				
PR1	Life cycle stages in which health and safety impacts of products and services are assessed for improvement, and percentage of significant products and services categories subject to such procedures	<a href="http://www.cheminova.com/en/about_us/news_views/safety_and_health.htm">http://www.cheminova.com/en/about_us/news_views/safety_and_health.htm</a>	F	-
Aspect: Product and service labelling				
PR3	Type of product and service information required by procedures, and percentage of significant products and services subject to such information requirements	<a href="http://www.cheminova.com/en/about_us/news_views/safety_and_health.htm">http://www.cheminova.com/en/about_us/news_views/safety_and_health.htm</a> Covering all plant protection products	F	12



# Special references

Previous CSR reports have included a number of appendixes in full length. This year we have decided to publish some of these appendixes only on Cheminova's website. Below is shown where these documents can be found.

Reference	Explanation	Where to find it
<b>Ownership and organisation</b> 	An overview of Cheminova's global organisation, regions, ownership and anchoring of CSR in the organisation	<a href="http://www.cheminova.com/en/about_us/management_and_structure/organisation.htm">http://www.cheminova.com/en/about_us/management_and_structure/organisation.htm</a>
<b>Responsible Care</b>  <b>Responsible Care®</b>	The European Chemical Industry Council's (CEFIC) Responsible Care programme for continuous improvement within safety, health and environment	<a href="http://www.cheminova.com/en/sustainability/production/responsible_care.htm">http://www.cheminova.com/en/sustainability/production/responsible_care.htm</a>
<b>Code of Business principles</b> 	A description of the company's Code of Business Principles which must be complied with by all employees and which support responsibility in relation to management, cooperation and society	<a href="http://www.cheminova.com/en/sustainability/csr_policy/code_of_business_principles.htm">http://www.cheminova.com/en/sustainability/csr_policy/code_of_business_principles.htm</a>
<b>Mission, vision and values</b> 	A description of the company's mission, vision and values	<a href="http://www.cheminova.com/en/about_us/understanding_cheminova/">http://www.cheminova.com/en/about_us/understanding_cheminova/</a>
<b>Supplier Code of Conduct</b> 	The fundamental principles which Cheminova's suppliers have to comply with	<a href="http://www.cheminova.com/en/sustainability/csr_policy/supplier_code_of_conduct.htm">http://www.cheminova.com/en/sustainability/csr_policy/supplier_code_of_conduct.htm</a>
<b>CSR Accounting Principles</b> 	The principles for data collection on environment, safety and health	<a href="http://www.cheminova.com/en/sustainability/data_and_summaries/csr_accounting_principles.htm">http://www.cheminova.com/en/sustainability/data_and_summaries/csr_accounting_principles.htm</a>
<b>FAO's Code of Conduct</b> 	Voluntary international standards of responsibility and behaviour concerning distribution and use of pesticides	<a href="http://www.fao.org/ag/magazine/mso35C.pdf">http://www.fao.org/ag/magazine/mso35C.pdf</a>
<b>UN's Millennium Goals</b> 	UN's 8 goals for reduction of poverty before 2015	<a href="http://www.un.org/millenniumgoals/">http://www.un.org/millenniumgoals/</a>
<b>Management approach to CSR Management</b> 	Summary of principles and procedures on CSR management	<a href="http://www.cheminova.com/en/sustainability/csr_policy/management_approach_to_csr_management.htm">http://www.cheminova.com/en/sustainability/csr_policy/management_approach_to_csr_management.htm</a>
<b>Principles of good corporate management</b> 	The statutory report on Corporate Governance 2011 – comments on recommendation on good corporate management	<a href="http://www.cheminova.com/en/about_us/governance/report_on_the_financial_reporting_process_and_internal_controls.htm">http://www.cheminova.com/en/about_us/governance/report_on_the_financial_reporting_process_and_internal_controls.htm</a>

# Glossary

**Active ingredient:**

Active chemical in its pure or technical form.

**Auditing:**

Review of accounts.

**Chemical synthesis:**

Process, where chemical compounds react with each other so that new compounds are formed.

**CIS:**

Commonwealth of Independent States.

**Class I product:**

A product, which according to WHO's recommended guidelines is classified as highly hazardous or extremely hazardous.

**CLP:**

Classification, Labelling and Packaging. The CLP Regulation ensures that the hazards presented by chemicals are clearly communicated to workers and consumers in the European Union through classification and labelling of chemicals.

**COD:**

Chemical Oxygen Demand - measure for the content of organic compounds in water.

**CSR:**

Corporate Social Responsibility. Social, environmental and ethical demands made between companies, customers, interested parties and collaboration partners.

**Emulsifiable concentrate:**

Mixture of a liquid active ingredient, solvents and surfactants that enable the product to be diluted with water to a low concentrate spray fluid.

**FAO:**

The UN's Food and Agriculture Organisation.

**FAO's Code of Conduct:**

FAO's international guidelines concerning the distribution and use of pesticides.

**Fenamiphos:**

Insecticide used against soil-living pests (nematodes).

**Formulation:**

Active ingredient to which has been added accessory agents that make the product a ready-to-use as control agent.

**Fossil fuel:**

Coal, oil and gas.

**GC:**

Gas Chromatography: A common type of chromatography used in analytical chemistry for separating and analysing compounds that can be vaporized without decomposition.

**GDP:**

Gross Domestic Product.

**GEC:**

Global Executive Committee. Cheminova's day-to-day management group.

**Global Compact:**

A UN initiative giving ten general principles for companies' work with corporate social responsibility.

**GRI:**

Global Reporting Initiative with guideline for reporting on CSR.

**HPLC:**

High-performance liquid chromatography – a very common analysis method of chemical compounds.

**HSE:**

Health, Safety & Environment.

**ISO 14001:**

International environmental certification covering the surrounding environment.

**KPI:**

Key Performance Indicator.

**Low VOC:**

Low Volatile Organic Compound, defined as maximum 20% evaporation at 115°C in 60 minutes cf. Estimation of Volatile Emission Potential of Pesticides by Thermogravimetry, California Department of Pesticide Regulation, February 9, 2005.

**Marketing portal:**

An internal website with useful information concerning marketing.

**Methomyl:**

Insecticide, in Mexico mostly used in cotton and vegetables.

**Methyl parathion:**

Insecticide mostly used in cotton.

**Microcapsules (microcapsule formulation):**

Fluid product where the active ingredient is encapsulated in microscopic capsules which are dispersed in water.

**Micronutrients:**

Mineral fertiliser which the plants need in small quantities.

**Nm<sup>3</sup>:**

Normal cubic meter (volume at standard pressure and temperature).

**OHSAS 18001:**

International environmental certification covering the working environment.

**Omethoate:**

Insecticide among others used to control mites.

**Pesticides (plant protection products):**

Collective name for insecticides, herbicides and fungicides.

**PIC:**

Prior Informed Consent (Prior informed consent that has to be established before a product from the PIC list is exported).

**Product stewardship:**

Overall description of responsible management of a company's products.

**Ramsar areas:**

Wetlands where wildlife is protected according to the convention of wetlands of international importance, particularly as habitats for birds.

**REACH:**

Registration, Evaluation and Authorisation of Chemicals (Common EU regulation on documentation requirements concerning chemicals).

**Registration data:**

Test results and documentation that must be submitted to the authorities in order to obtain registration certificates for import and sales permissions.

**Responsible Care:**

Objectives concerning responsible conduct, adhered to by Cheminova.

**SAFE:**

Safe Attitude (behaviour) For Everybody.

**Saheli:**

Saheli is formed taking the first two letters from each of the three core areas Safety, Health and Livelihood.

**Suspension concentrate:**

An active ingredient in solid form suspended in water with surfactants which enables the product to be diluted with water to a low concentrate spray liquid.

**Third-party products:**

Sales products not produced by Cheminova but bought from other suppliers.

**WHO:**

World Health Organisation.



## Statement GRI Application Level Check

GRI hereby states that **Cheminova A/S** has presented its report "Corporate Social Responsibility Report 2012" to GRI's Report Services which have concluded that the report fulfills the requirement of Application Level B.

GRI Application Levels communicate the extent to which the content of the G3 Guidelines has been used in the submitted sustainability reporting. The Check confirms that the required set and number of disclosures for that Application Level have been addressed in the reporting and that the GRI Content Index demonstrates a valid representation of the required disclosures, as described in the GRI G3 Guidelines. For methodology, see [www.globalreporting.org/SiteCollectionDocuments/ALC-Methodology.pdf](http://www.globalreporting.org/SiteCollectionDocuments/ALC-Methodology.pdf)

Application Levels do not provide an opinion on the sustainability performance of the reporter nor the quality of the information in the report.

Amsterdam, 5 March 2013

Nelmar Arbex  
Deputy Chief Executive  
Global Reporting Initiative



The Global Reporting Initiative (GRI) is a network-based organization that has pioneered the development of the world's most widely used sustainability reporting framework and is committed to its continuous improvement and application worldwide. The GRI Guidelines set out the principles and indicators that organizations can use to measure and report their economic, environmental, and social performance. [www.globalreporting.org](http://www.globalreporting.org)

**Disclaimer:** Where the relevant sustainability reporting includes external links, including to audio visual material, this statement only concerns material submitted to GRI at the time of the Check on 22 February 2013. GRI explicitly excludes the statement being applied to any later changes to such material.



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