

Chemical substances monitoring in Estonia

Chemicals are all around us, from natural chemicals in food to industrially produced ones, distributed by trade and by long-range transport of pollutants, found in working surrounding, environment and consumers' products. They may ease our everyday life but at the same time cause allergies, cancer, effects on the reproduction or chronic toxic effects.

Therefore the management of chemicals risks is one of the high priority issues on European and international levels. A large number of Directives as well as international agreements are available as tools for the reduction of risks posed by chemicals. This is inevitable a complex area demanding great resources as well as very good co-operation from public institutions and industry.

Estonia has transposed the existing requirements of the European Chemicals and chemicals-related legislation into national legislation. However besides the ensuring an adequate and efficient legislation on chemicals, control, the main and even greater challenge is to develop the capability and the capacity of the enterprises to take their responsibility according the legislation. Especially now when a new chemicals policy has been launched in EU (called REACH- Registration, Evaluation, Authorisation and Restriction of Chemicals), which would furthermore give greater responsibility to industry and reverse the burden of proof from public authorities to industry for ensuring the safety of chemicals on the market.

REACH The new EU Chemicals legislation, REACH, will enable many of the shortcomings in the handling of chemicals to be remedied. Companies will be given more explicit responsibility for investigating the environmental and health hazards of their chemical substances. Companies will assess the risks and account for how their substances can be handled safely. Substances which are especially hazardous will not be allowed without a permit. Exactly what role the various authorities will have in implementing the various parts of REACH is not yet clear. REACH took effect on the 1 June 2007.

Therefore continuous awareness and knowledge raising, know-how exchange, capacity building and strengthening of dialogue and co-operation of state authorities, industry, trade and consumers in a field of chemical risks management through the workshops, specific meetings, trainings is one of the priority issues within the Baltic Environmental Forum. Look more www.bef.ee

Estonian chemicals industry. Chemicals industry sector in Estonia has a strong spatial concentration, as several biggest companies are situated in North-East Estonia. A significant part of the North-Eastern Estonian chemicals industry bases on thermal processing of oil shale resulting on shale oil fuel with its by-products like oil shale phenols, oil coke, bitumen etc. Despite going through great structural changes in 1990s (the termination of manufacturing several products- fertilizers based on phosphorus, benzene, toluene, some medicinal products), the sector has gained stability during the last years. As of April 2005, there were registered 92 enterprises, who main field of activity is the manufacture of chemical products. 112 companies declared their main field of activity as wholesale of chemical products.

“REACH ABC-manual for industries” January 2008, “REACH ABC- käsiraamat tööstusele” detsember 2007 can be find on www.bef.ee

The REACH Regulation gives greater responsibility to industry to manage the risks from chemicals and to provide safety information on the substances. Manufacturers and importers will be required to gather information on the properties of their substances, which will help them manage them safety, and to register the information in a central database. A Chemical Agency will act as the central point in the REACH system: it will run the databases necessary to operate the system, co-ordinate the in-depth evaluation of suspicious chemicals and run a public database in with consumers and professionals

can find hazard information. The Regulation also calls, for the progressive substitution of the most dangerous chemicals when suitable alternatives have been identified.

The Chemicals Notification Centre was founded on the 1st of July in 1999 in the area of government of the Ministry of Social Affairs. The main duty of The Chemicals Notification Centre is to collect information concerning chemicals, which are imported into Estonia, or produced in Estonia by high or lower volume production or which contain a new substance and to assess the risks arising from notified chemicals. More information available in Estonian and in English: www.ktk.ee For example, Databases: Notified existing substances; Safety data sheets; Biocidal products database; Detergent database etc.

Legislation about chemicals:

- 1) Chemicals Act www.riigiteataja.ee/ert/act.jsp?=12766201
- 2) Regulations related to the Chemicals Act www.ktk.ee for example, Procedure for Notification of Chemicals; Claims and Order about Identification, Classification, Packaging and Labelling of dangerous chemicals www.riigiteataja.ee/ert/act.jsp?=1015534 etc
- 3) Biocides Act www.riigiteataja.ee/ert/act.jsp?=12803816
- 4) Regulations related to the Biocides Act

Baltic Environmental Forum (BEF) has organised many educational seminars for environmental and consumer NGO-s in 2006-2008 to arise their awareness about chemicals, chemicals risks and REACH. NGO-s worked and are working on in these chemicals topics to educate and inform consumers in Estonia. Leaflets produced by BEF 1) Chemicals at home- helpers or enemies? and 2) Eco-labelled products: luxury or need? can find on www.bef.ee/index.php?id=472

Consumer awareness raising information on the website www.tartutarbija.ee :

1. Identification, Classification, Packaging and Labelling of dangerous chemicals
2. Dangerous substances in products
3. 2006 Chemicals Control
4. Leaflet Ohtlike kemikaalide voldik
5. Leaflet Loodussõbralik1.pdf , Loodussõbralik2.pdf
6. Book Kemikaalide raamat.pdf www.bef.ee Käsiraamat “Kemikaalid tarbetoodetes-praktilised vahendid tarbija teavitamiseks” 2007
7. Negative influence of washing and cleaning detergents on environment and health, 2006 roheline pesutaus.doc
8. 2007 Kuidas hoiduda ohtlikest kemikaalidest.doc
9. Ecolabels, ecolabelling in Estonia, Ökomärgistus Eestis www.roheline.ee
10. Recommendations and prefer environmental friendly products, Soovitused ja eelista keskkonnasõbralikke tooteid.ppt
11. Glyphosates damage environment and health, 2007 glüfosaatide toimest Luule Metspalu.doc

Chemical substances monitoring in Sweden

The Swedish Environmental Protection Agency is working in several ways with issues concerning chemicals. All of these organizations' work is intended to achieve the environmental quality objective of 'A non-toxic environment'. The goal is for the environment to be free from man-made or extracted compounds and metals that represent a threat to human health or biological diversity.

The primary responsibility of the Swedish Environmental Protection Agency is to reduce the environmental impact associated with the use and distribution of chemicals and chemical products, as well as the discharge of unintentionally produced or extracted compounds. The Swedish Chemical Agency is the central supervisory authority for the control of chemicals in Sweden. We work closely with the Swedish Chemicals Agency, also responsible for the environmental quality objective of 'A non-toxic environment'.

Non-toxic and resource-efficient ecocycles

In order to achieve the environmental quality objectives, authorities work with so-called action strategies. One of these strategies is referred to as "Non-toxic and resource-efficient ecocycles" which is to co-ordinate activities concerning waste, chemicals and products. A fundamental part of this strategy is that measures must be taken that consider the total environmental impact which materials and substances have throughout the life-cycle of products. The Swedish Environmental Protection Agency has been commissioned by the Swedish government to develop this strategy which is an important instrument for achieving the environmental quality objective 'A non-toxic environment'.

Environmental monitoring and quality standards

Sweden has a comparatively well-developed system for monitoring, regulating and documenting the state of its environment. The Swedish Environmental Protection Agency is responsible for monitoring national environmental toxins. We co-ordinate monitoring within Sweden and also contribute to regional monitoring. The goal of this work is to monitor the state of the environment, for example with regard to changes over time in the concentration of environmental contaminants, and the possible causes of these concentrations and their environmental impact. We also study differences in various parts of the country.

Apart from environmental monitoring of the state of the environment we also monitor the environmental impact of chemical discharge and the unintentional production of various compounds. The Swedish Environmental Protection Agency develops proposals for environmental quality standards based upon environmental impact. International environmental cooperation includes demands to monitor the state of the environment, and since Sweden entered the EU the demands on Sweden to monitor in certain areas have become more stringent.

What are environmental quality standards?

An environmental quality standard may set, for example, the maximum permitted concentration of a substance in air, soil or water. Standards may be proclaimed for the country as a whole or for a smaller area, such as a county or local authority area.

The basis for a standard is our knowledge of what humans and the natural environment can tolerate.

The standards can also be regarded as policy instruments to achieve eventual compliance with environmental objectives. Mandatory EC directives on air quality among other matters were a further motive for the introduction of environmental quality standards.

What are the standards concerned with?

The greatest number of environmental quality standards are concerned with outdoor air pollutants. There are standards on:

- Nitrogen dioxide;
- Nitrogen oxides;
- Sulphur dioxide;
- Carbon monoxide;
- Lead;
- Benzene;

- Particulates (PM10);
- Ozone.

There are also standards on various chemicals in fish waters and mussel waters and on ambient noise. An EEC directive on environmental quality standards for certain dangerous pollutants in surface waters is currently under discussion in the Council and the Parliament.

Government decides

The power to issue environmental quality standards is vested in the Government in the first instance. However, if a standard is mandated by a new EEC directive the Government can delegate this power to the EPA. Environmental quality standards for surface waters are issued by the water authorities.

The Swedish EPA produces regulations and other guidance for the water authorities in relation to environmental quality standards for water, and for local councils in relation to environmental quality standards for outdoor air.

Water authorities and local councils must enforce compliance with existing standards when conducting inspections, assessing permit applications, planning etcetera.

Remedial programmes are sometimes necessary

Should it be necessary for compliance with a standard or with a ruling of the European Community Court, the Government, an official agency, a local authority or a municipal association has the power to impose a remedial programme.

Action plans exist today for nitrogen dioxide and for particulates (PM10) in some Swedish localities.

Chemicals and water management

The EU framework directive on water has been incorporated into Swedish law through the ordinance regulating the quality of water environments. Thus the prerequisites have been changed regarding work to reduce the amount of hazardous chemicals in waters. The objective of the directive is to achieve a good surface water status in all waters by the year 2015, and includes both the chemical and ecological status.

In order to achieve a good chemical status, none of the environmental quality standards set by the regional water authorities are to be exceeded. If water authorities judge that there is a risk that a standard cannot be achieved by 2015, then they must propose measures intended to achieve the standard. These will then be included in the activities programme which is developed for the district and which is summarised in the management plan. Activities programmes are directed toward other authorities who in their exercise of public authority are responsible for the achievement of these standards.

In 2007 a proposal for a daughter directive is being negotiated in the European Council and Parliament about the environmental quality standards for 33 priority compounds and eight other contaminating compounds. These standards will then be incorporated into Swedish law.

The new EU chemicals legislation - REACH

The new EU chemicals legislation, REACH, will enable many of the shortcomings in the handling of chemicals to be remedied. Companies will be given more explicit responsibility for investigating the environmental and health hazards of their chemical substances. Companies will assess the risks and account for how their substances can be handled safely. Substances which are especially hazardous will not be allowed without a permit. Exactly what role the various authorities will have in implementing the various parts of REACH is not yet clear. REACH took effect on the 1 June 2007.

Granting permits

Swedish environmental legislation also places demands on the handling of chemicals. The Swedish Environmental Protection Agency participates as an expert authority or as a party in the assessment of permit applications in accordance with the Swedish Environmental Code. The general rules of consideration stipulated in the Swedish Environmental Code are decisive in the assessment of these permit applications with regard to the extent to which demands can be placed upon an operator.

In several permit applications in the forest, chemical and automotive industries, we have been a driving force in developments to see to it that operators have sufficient knowledge about the chemicals used and their handling. This knowledge is needed in order for the operators to be able to assess the risk

of using various chemicals. This knowledge is also a prerequisite for companies' and authorities' ability to work with the product choice principle and to fulfil the precautionary principle of the Environmental Code.

The Swedish Environmental Protection Agency is also the decision-making authority in certain chemical commissions such as exemptions from recommended use of ozone-degrading substances.

Supervision and guidance

The supervision of chemicals is an important part of the supervision of environmentally hazardous operations. The Swedish Environmental Protection Agency supervises the handling of chemicals where no other central authority supervises in accordance with the ordinance on supervision in the Swedish Environmental Code (1998:900). We are also the supervising authority in waste-related issues. Chemicals and unintentionally produced substances in waste can make the recycling and disposal of waste difficult.

Remediation of contaminated areas

Chemicals and unintentionally produced substances can contaminate land and water. The number of potentially contaminated areas in Sweden is estimated to be approximately 83,000, approximately a fifth of which are considered to be at high or very high risk of presenting a hazard to human health or the environment. The Swedish Environmental Protection Agency is the central authority that co-ordinates remedial work within the country and subsidizes measures where there is no responsible party.

Information to the public on discharges

A new EU regulation with demands to establish an EU-wide list of contaminating discharges took effect in 2006. The purpose of the list is to improve public access to information about contamination in the European Union. The list will be made accessible to the public via the Internet.

Sweden has undertaken through the Aarhus Convention to provide a national list of discharges. The Swedish Environmental Protection Agency has established a list of chemical discharges (Swedish acronym: KUR). KUR is a list of chemical discharges from major operations, and is a part of our work to provide the public with access to information on national discharges.

Global work with chemicals – conventions

Water and airborne contaminants can be transported over great geographical distances, and discharges and emissions in one land can have an impact on the environment in other countries. Various forms of international environmental co-operation are thus a necessity. The Swedish Environmental Protection Agency works with international conventions and agreements and participates in Sweden's cooperative development in the environmental field. We participate in various work groups for conventions and at major international meetings, where we discuss the development and implementation of the conventions.

Global work with chemicals – cooperative development

The Swedish Environmental Protection Agency participates in environmental work within the framework for Swedish development aid and Swedish global development policy. Our international projects are based on the assistance requested by the countries with which cooperate. We work especially to provide support to countries with regard to the development of environmental legislation, the organisation of environmental work in efficient authorities, and compliance with international environmental agreements. Chemical issues and environmental demands on industries that are environmentally disturbing are some of several areas with which we work. In this context we also cooperate with the Swedish Chemical Agency.