

Chemicals

Overview of current legislation

There are two main legislative instruments for safe management of chemicals in Iceland.

The first one is the *Act no 52/1998 concerning toxic and hazardous substances*. The initial provisions of this act states that: *Toxic and hazardous substances must be used with care and precautions in such a way that people and animals are not harmed, and food or the environment are not polluted by the substances*. The Act specifies that special permits are required for manufacturing, and use of toxic substances. Plant protection products and substances used for pest control need to be registered before they are allowed for marketing and use in the Icelandic market. As a member state in EFTA and the European Economic Area (EEA), Iceland has implemented most of the EU-legislation concerning chemicals with bases in the above mentioned act. The most important provisions hereunder are on classification and labelling of substances and preparations, biocides and cosmetics. It also contains provisions for detergents, ozone depleting substances and POPs.

The second one, the *Act no 45/2008 on chemicals and preparations* was set to enable implementation of the EU regulation on Registration, Evaluation and Authorisation of Chemicals (REACH). The overall goal of REACH is to ensure high level of protection of human health and the environment as well as ensuring free circulation of substances on the EEA market while enhancing competitiveness and innovation.

Assessment of chemicals

Classification, packaging and labeling

As a part of the EEA agreement, Iceland has implemented the EU legislation concerning classification, packaging and labeling of hazardous substances (Council Dir. 67/548/EEC), and preparations (Council Dir. 1999/45/EC). Toxic and hazardous substances should be classified according to 10 different hazard-classes. Further more, special rules apply for plant protection products which additionally are also classified into 4 risk groups, X, A, B and C. Toxic plant protection products fall into X and A groups and those who are classified as hazardous fall into B and C groups. Only certified persons are allowed to buy and use products that fall into X and A groups.

All toxic and hazardous products should be labeled. Labels contain relevant pictogram according to class as well as information on hazards and safety precautions. All classified chemicals and preparations should be packaged safely and safety data sheets with more detailed information should be available upon request, to consumers.

Iceland is also planning to implement the new EU regulation no. 1272/2008 on classification, labelling and packaging. It is foreseen that it will enter into force in mid year 2010. This new regulation applies the general principles of the United Nations system of Global Harmonisation to all chemicals and preparations (mixtures) in the EU. That way the same hazards will be described and labelled in the same way around the world.

REACH

Iceland implemented the REACH regulation (COM Reg. no. 1907/2006) in June 2008. According to REACH, all substances which are manufactured in the EEA or imported into the EEA market, in amounts over 1 tonnes/year should be registered in a central database. The responsibility for registration is on the industry itself and they are required to gather and assess information about the risk of chemicals to the human health or the environment. Substances shall not be manufactured nor placed on the market unless they have been registered.

The European Chemicals Agency (ECHA) evaluates compliance and completeness of registration dossiers, while competent authorities evaluate the chemicals based on test results and other available information which are submitted by industry. The evaluation of a substance can lead to decision that the substance should be subject to a restriction of use or special authorisation. REACH states that all substances of very high concern require an authorisation for use and placing on the market. Authorisation is only granted if it is demonstrated that the risk from using the substance is adequately controlled. If not, then it may also be granted if the socio-economic benefits outweigh the risks and there are no suitable alternative substances or processes. The authorisation procedure should therefore lead to the substitution of substances of very high concern by less problematic substances.

Sound management of toxic and hazardous chemicals

POPs

Persistent Organic Pollutants (POPs) are substances that pose threat to human health and the environment by possessing toxic characteristics and being bioaccumulative. Their persistence and proneness to long-range transport and deposition have made the substances ubiquitous in the environment, resulting in significant quantities in wildlife even in areas such as the Arctic, far from the sources of the contamination. Owing to the transboundary transport of POPs, a global effort is needed in order to deal with the problem by agreeing on minimizing or eliminating the releases of POPs to the environment. Iceland ratified the Stockholm Convention 29 May 2002 and the Convention entered into force 17 May 2004. In addition, Iceland has implemented EU regulations which cover substances that fall under the Stockholm convention, these include COM regulations no. 850/2004, 1195/2006, 172/2007 and 323/2007.

Persistent organic pollutants, e.g. PCBs, DDT, HCB, HCH isomers, trans-nonachlor, trans and cis chlordane, have been monitored in air and precipitation since 1995 at Stórhöfði in the Vestman Islands off the south coast of Iceland. The measurements, reported as monthly mean concentrations, are made as part of the European Monitoring and Evaluation Program (EMEP) that involves twelve measurement sites in nine countries. In addition heavy metals in air and precipitation are monitored regularly. Further information and results can be found on the EMEP website:

<http://tarantula.nilu.no/projects/ccc/emepdata.html>

Ozone depleting substances

Iceland ratified the Vienna Convention for the Protection of the Ozone Layer and the Montreal Protocol on Substances that Deplete the Ozone Layer in 1989. Iceland has ratified the following amendments to the Montreal Protocol:

- Adjustments and changes made in London on 29 June 1990, ratified in 1993
- Adjustments made in Copenhagen on 25 November 1992, ratified in 1994
- Adjustments made in Montreal on 17 September 1997, ratified in 2000

Iceland has not ratified the adjustments made in Beijing on 3 December 1999. Icelandic regulations on ozone depleting substances are in line with EU legislation for that matter and take note of the EU regulation no. 2037/2000 with subsequent amendments.

In Iceland the use of CFCs were gradually phased out in the 1990s. Now the use of CFCs in Iceland is prohibited.

Until 1. January 2010 it was allowed to import HCFCs to Iceland for use in cooling systems, special quotas were set and all import was subject to strict control. From 1. Jan 2010 – 1. Jan 2015, only recycled HCFCs are allowed on the market in Iceland and then they will be totally phased out.

Biocides

Provisions regarding biocides are in line with EU legislation. Iceland has already implemented Council Dir 98/8/EC regarding placing biocidal products on the market. The Biocidal Product Directive aims to harmonise the European market for biocidal products and their active substances. At the same time it aims to provide a high level of protection for humans, animals and the environment. The basic principles of the Directive are that all active substance has to be assessed before they are allowed for use in biocidal products on the market. Also all biocidal products shall be authorised before placing them on the market.

Most product types in the main group pest control must be authorized according to the legislation relating to PPPs until the active substances have been evaluated according to 98/8/EC. Authorisation of products after the risk assessment of active substances will start in 2010.

Plant protection products – agricultural chemicals

Plant protection products (PPP) may neither be manufactured, imported, sold nor used in Iceland without an authorization (registration) granted by the Ministry for the Environment. Before authorization and marketing, all PPPs undergo an evaluation based on an assessment of the active ingredient and adjuvant, especially as regards: the effects on human health and the environment, the area of use, dosages and methods of use and the size of packaging. All classified PPPs are labeled in Icelandic.

Plant protection products (PPP) are classified in the hazard classes Tx, T, Xn, N etc. and the risk groups X, A, B and C. The risk groups are used to manage their import, sale and use. Companies importing and

selling PPPs in group X, A and B must have a license for import and sale granted by the Ministry for the Environment. In addition, only certified persons are allowed to buy and use products that fall into X/A groups. For a PPP in group B (dangerous) the prospective buyer must sign for it by purchase. No restrictions apply for import and sale of PPPs in group C.

Data on the sales quantity of plant protection products, including non-agricultural pest control, is collected.

Waste Management

Background

Overview of current waste management

In 1970, the main method of waste disposal in Iceland was open-pit burning. Over 50 burning pits were in operation, close to one pit per municipality, and only three landfills. In 1990, six landfills and three incineration facilities were in operation and the burning pits were less than 50. But the biggest improvement came when Iceland joined the European Economic Area in 1994 and became obliged to implement EU legislation pertaining waste management. By 2003, open-pit burning had almost been eliminated, 29 landfills and seven incineration facilities were in operation, all of which by virtue of environmental permits. Since then, recycling and other ways of waste recovery have become more prominent. In 2007, about 583 000 tonnes of waste were generated in Iceland; thereof 177 000 of municipal waste, 343 000 tonnes of production waste, 10 000 tonnes of hazardous waste and 63 000 tonnes of other waste. Over 58% of that waste was recovered by various means, e.g. material recycling, composting and incineration with energy recovery, while 42% were disposed of at landfills. The proportion of the population that was served by collecting and managing waste was 100%.

Overview of current legislation

Icelandic legislation regarding management of solid waste is now in accordance with EU legislation. The legislation covers all solid waste situated onshore and its main objectives are to promote environmentally sound management of waste, prevent pollution of waters, soils and atmosphere, and to minimize the adverse impact of waste disposal on human health. Reducing the amounts of waste generated is the main priority of the waste hierarchy provided in the legislation. Second is re-use, third is recovery and the least favourable is disposal. All activities concerning waste management are subject to environmental permits and all waste that is generated shall be transferred to collection points or waste reception facilities where it receives environmentally sound treatment. It is the responsibility of each municipality to decide in which manner the waste is collected from households and businesses and they are responsible for ensuring that proper facilities exist for the management of all the waste generated. In dealing with the cost accompanying waste management, the polluter-pays principle is followed in general. The municipalities are authorized to charge inhabitants and waste holders a fee which covers the whole cost. Furthermore, operators of disposal facilities are obliged to charge the waste holders a fee which covers the total cost of disposal. In recent years, more elaborate schemes have been formed in order to adopt the polluter-pays principle and increase producer responsibility. A fee is imposed on beverage packaging during production or import and upon return of the packaging waste to a certified collection point, the appropriate portion of the fee is returned to the waste holder. The Recycling Fund, which was established in 2003, is meant to create economic conditions for re-use

and recovery of certain types of waste, i.e. hazardous waste, end-of-life vehicles, packaging waste, used tires and used fishing gear, in order to reduce the amounts of waste that is sent for disposal, and to ensure the proper disposal of hazardous waste. The Fund charges manufacturers and importers a recycling fee, which is meant to cover the cost of environmentally sound management of these waste types. The most recent addition is that manufacturers and importers of electrical and electronic equipment are now responsible for the collection and management of such equipment after use.

Specific measures regarding management of hazardous waste

The government policy regarding hazardous waste is aimed at ensuring that hazardous waste will not enter and pollute the environment. This policy is reflected by the main objective of a specific secondary legislation on hazardous waste, which was passed in 1999. The legislation commands that generation of hazardous waste shall be prevented as much as possible, and that re-use and recovery of hazardous waste that is generated nonetheless shall be promoted. The municipalities are responsible for setting up collection points where hazardous waste can be delivered to and for transporting collected waste for recovery or disposal at permitted facilities. As mentioned earlier, hazardous waste is one of the waste types the Recycling Fund deals with, promoting re-use and recovery. In order to ensure environmentally sound management of hazardous waste, all treatment facilities are subject to environmental permits.

The secondary legislation on hazardous waste commands activities that are subject to environmental permits and generate hazardous waste to keep inventories on hazardous waste production – quantities, types, treatment and disposal. Transporters and facilities that treat hazardous waste are subject to the same provisions. In 2007, 10 000 tonnes of hazardous waste were generated in Iceland. About 9000 tonnes were recovered domestically while just over 1000 tonnes were exported to other European countries for treatment. Hazardous waste is not exported unless it cannot be treated domestically in an environmentally sound manner. No hazardous waste is disposed of at landfills in Iceland since no landfills for such waste exist. In order to prevent unsupervised international transportation of hazardous waste, all such transportation is subject to permits and Iceland is a party to the Basel Convention on supervision of shipping of hazardous waste between countries. In addition, Iceland takes note of an OECD decision regarding the matter and does not export waste unless it is covered by this decision.

In 2005, the Environment Agency published a report on soil protection and remediation of contaminated sites in Iceland. A part of the study was to perform a preliminary survey of contaminated sites within the country. The result was that there are over 200 sites that are possibly contaminated.

Recent secondary legislation commands PCB phase-out by the end of 2010.

Specific provisions regarding management of radioactive waste

In Iceland there are no nuclear power plants or other sources of radioactive waste.

Heading into the future – policies and strategies

Government policy and general objectives of waste management plans

As can be gathered from the short overviews above, waste management in Iceland has improved enormously in the past few decades and is now well on the way of becoming recycling-oriented. However, more work is to be done in order to build a fully recycling-oriented society and to decrease the amounts of waste that are generated. In 2004, the Environment Agency of Iceland published a national plan for waste management. The plan covered the whole country and laid out the government policy regarding waste management. The government policy focused mainly on six tasks: 1) take note of the polluter-pays principle, 2) standardize yearly reports of quantities and types of waste, 3) treat asbestos, infectious waste and contaminated soil responsibly, 4) treat hazardous waste domestically if possible, 5) ensure that those who manage waste possess sufficient knowledge to do so, and 6) endeavour to provide economic conditions for treatment of waste. This policy has been incorporated into the Icelandic waste legislation. In addition to the government policy, the overall objectives of the national plan were to reduce the generation of waste in a targeted manner, increase re-use and recovery, and to reduce the waste proportions destined for disposal. The objectives were consistent with the waste hierarchy presented in the current legislation. In addition to the publication of the national plan, the municipalities prepared and published plans of their own. These were local plans that laid out the ways the municipalities had chosen to achieve the objectives of the national plan in their respective areas. These plans therefore affected planning and management of land resources, which are decisions made at the municipality level.

The national waste management plan is currently under revision and a revised edition will be published in 2010. During that process, various stakeholders and parties within the waste sector are consulted, e.g. the Association of Local Authorities in Iceland (the municipalities) and the Federation of Icelandic Industries. Revisions of the first editions of local waste management plans are also due, and many of the municipalities have started that process. In addition, the Association of Local Authorities has published a policy on waste management where the overall objective is sustainable management of waste. In the new edition of the national plan, sustainable management of waste will be the ultimate objective. The objective will thus be consistent with a forthcoming implementation of recent EU legislation, where promotion of sustainable use of natural resources will be incorporated into the Icelandic waste legislation. During the implementation, a new waste hierarchy will also be incorporated: 1) prevention, 2) preparing for re-use, 3) recycling, 4) other recovery, e.g. energy recovery, and 5) disposal. This hierarchy is similar to the current one but focuses more on material recycling than other means of recovery. As before, the objective of sustainable management will primarily be pursued by reducing the generation of waste and by increasing waste recovery, in agreement with the waste hierarchy. Emphasis will be placed on disconnecting the ties between economic growth and increase in waste generation, ensuring the recovery or re-use of waste and on utilizing methane produced through decomposition of waste at landfills. In addition to the revised national plan, a waste prevention programme covering the whole country will be established before end of 2013.

The strategies selected to reach the objectives of the national waste management plan

The strategies that have been selected in order to reach the objectives of the national waste management plan will be laid out in the revised edition. The general strategies will be divided into four main sections:

1. Generation of waste should be decreased by:
 - a. municipalities charging waste management fees that reflect the actual cost of the management.
 - b. the Environment Agency setting up a web site where the public is informed about ways to re-use and prevent waste generation in households.
 - c. promoting the production of goods which minimize waste generation after use.
 - d. adopting more producer responsibility.
2. Material recycling and recovery should be increased by:
 - a. making easier for consumers to return used goods and other waste to supermarkets and other vendors.
 - b. promoting the use of plastic recycling identification codes and labels in order to make sorting and recycling of plastic packaging easier.
 - c. increasing sorting of waste, taking into account environmental, technical and economical factors.
 - d. municipalities increasing their level of service to the public regarding sorting of waste.
 - e. promoting the use of products made from recycled materials.
 - f. promoting the use of fuel made from waste.
3. Education of producers, the public and people who work in the waste sector should be increased by:
 - a. the Environment Agency leading the way in cooperation between all parties participating in education within the waste sector.
 - b. informing of the waste management hierarchy.
 - c. informing of the advantages of recycling of waste
 - d. promoting the use of eco-labelled products.
 - e. promoting the use of less hazardous alternatives to hazardous chemicals during production of goods.
 - f. encouraging companies and institutions to set up and follow an environmental policy.
 - g. encouraging companies and institutions to set up a certified environmental management systems.
4. Legislation in the waste sector should be improved by:
 - a. revising the Waste Management Act before the end of 2012. The focus should be on the waste management hierarchy.
 - b. revising definitions of terms.
 - c. defining the responsibilities of each party within the waste sector.
 - d. adopting polluter-pays principle in more areas.
 - e. improving the databases regarding quantities and types of waste that is generated and treated.

More direct strategies and numerical goals for eight different waste types will also be laid out in the revised plan:

1. Biodegradable waste:
 - a. disposal of untreated slaughterhouse-waste at landfills shall be prohibited.
 - b. home composting will be encouraged.
 - c. by year 2013, no more than 36 100 tonnes of biodegradable municipal waste and 84 100 tonnes of biodegradable production waste shall be disposed of at landfills on a yearly basis.
 - d. by year 2020, no more than 25 250 tonnes of biodegradable municipal waste and 58 900 tonnes of biodegradable production waste shall be disposed of at landfills on a yearly basis.
2. Packaging waste:
 - a. consumption of tap water, instead of bottled water, shall be encouraged.
 - b. re-use of beverage packaging shall be encouraged.
 - c. by year 2011, at least 60% of packaging waste shall be recovered.
 - d. by year 2011, at least 60% of glass packaging waste, 60% of paper and cardboard packaging waste, 50% of metallic packaging waste, 22.5% of plastic packaging waste and 15% of timber packaging waste shall undergo material recycling.
 - e. the responsibilities of each party within the waste sector, e.g. municipalities, the Recycling Fund and the industries, regarding reaching the numerical goals will be clarified.
3. Waste electrical and electronic equipment (WEEE):
 - a. by the end of 2010, 95% of producers and importers shall be members of a take-back system, covering 98% of the total market.
 - b. at least 85% of WEEE in categories 1 and 10 shall be recovered, and component, material and substance re-use and recycling shall be at least 80%.
 - c. at least 80% of WEEE in categories 3 and 4 shall be recovered, and component, material and substance re-use and recycling shall be at least 70%.
 - d. at least 75% of WEEE in categories 2, 5, 6, 7 and 9 shall be recovered, and component, material and substance re-use and recycling shall be at least 55%.
 - e. by year 2016, separate collection of WEEE shall be at least 65% of the electrical and electronic equipment placed on the market.
4. End-of-life vehicles (ELV):
 - a. re-use and recovery of ELVs shall be at least 85% and re-use and recycling at least 80%.
 - b. by the end of year 2014, re-use and recovery of ELVs shall be at least 95% and re-use and recycling at least 85%.
5. Construction and demolition (C&D) waste:
 - a. by year 2020, at least 70% of inert C&D waste shall be re-used, recycled or recovered by other means.
6. Household waste:
 - a. by year 2020, at least 50% of paper, metals, plastic and glass shall be re-used, recycled or recovered by other means.

7. Hazardous waste:
 - a. through education of the public and businesses, generation of hazardous waste shall be decreased.
 - b. collection of hazardous waste at collection points shall be safe, secure and performed in an environmentally sound manner.
8. Batteries and accumulators: by year 2012, at least 25% of small waste batteries or accumulators, which are not used in cars or industry, shall collected separately and recovered.
 - a. by year 2016, at least 45% of small waste batteries or accumulators, which are not used in cars or industry, shall collected separately and recovered.

Icelandic Recycling Fund

In recent years, understanding has increased of how necessary it is to gain control of the growing quantity of waste that has accompanied today's consumer society.

Demands are placed by individuals, municipalities and the commercial sector on systematic solutions for waste and on products not causing damage to the environment. At the level of the European Economic Area, rules with this objective have been set for the Area as a whole, as well as by the governments of individual member states.

These rules build on the "polluter pays principle", meaning that whoever causes waste should pay for its reuse, recovery or disposal. The trend is towards shifting responsibility to an ever greater extent onto those who put the product on the market, regardless of whether they are manufacturers or importers. This is referred to as "producer liability".

Iceland's authorities have set the goal of systematically reducing waste formation and channelling waste into reuse and recovery. The Act on Recycling Fees was passed in an effort to achieve this end, charging the Icelandic Recycling Fund with creating conducive economic conditions for reuse and recovery, lowering the volume of waste going into final disposal and ensuring the proper disposal of hazardous substances.

The Recycling Fund is a state-owned agency, responsible to the Minister for the Environment. In order to ensure the best possible outcome of agency activities, its Board is composed of the representatives of those who have the greatest interest in waste handling being as efficient as possible, i.e. representatives of municipalities and the commercial sector.

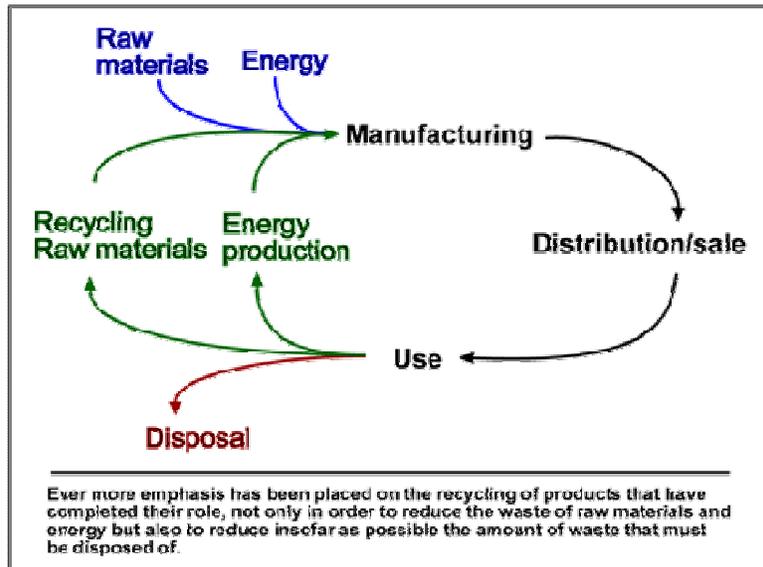
The five directors on the Recycling Fund Board are appointed by the Minister for the Environment for four-year terms. The Minister appoints the Board Chairman without a nomination, along with one director upon a mutual nomination by the Federation of Icelandic Fish Processing Plants and the Federation of Icelandic Fishing Vessel Owners, one director from the Federation of Icelandic Industries, one director from the Federation of Trade and Services and one director from the National Association of Local Authorities in Iceland.

The Fund applies economic incentives to establish practical arrangements for processing waste, which means providing the monetary prerequisites so that businesses in the market will realise the benefit of

involving themselves in the processing programme. It is for this reason that the Fund contracts out waste processing, based on tenders or task contracts, and uses the recycling fee to pay the expenses.

Reasoning and strategy

Raw materials and energy for manufacture are often limited resources which we need to save as much as possible.



The acquisition of raw materials and energy for producing goods often exhausts natural riches, so that in recent years more and more emphasis has been placed on the recovery of products that have completed their role, not only in order to reduce the waste of raw materials and energy but also to reduce, insofar as possible, the amount of waste that must be disposed of. This is the mission of the Icelandic Recycling Fund.

RECYCLING FEES

To finance the tasks assigned to the Recycling Fund, a recycling fee is collected on each product before it goes on the market after its manufacture or importation.

The fee should pay the recovery cost on any waste remaining when the object's service life is over. As applicable in each case, the fee might cover the cost of handling sorted waste at a collection point, transporting the waste from a collection point to a central accumulation point or recovery point, and recovering or disposing of the waste and paying the fee.

Those paying are domestic manufacturers and importers bringing goods subject to the fee to Iceland. The obligation of paying extends to every producer and importer, including individuals, associations, funds and institutions, municipalities and their institutions, the State Treasury, state agencies, foreign contractors and any other entities importing or producing goods subject to the fee.

Should a product subject to the fee be exported out of Iceland, so that no reprocessing occurs in this country, the exporter will receive a fee refund.

The Recycling Fund is authorised to negotiate fee refunding with businesses which recover their own waste.

Deciding the recycling fee amounts

The amount of a recycling fee shall be based on Recycling Fund estimates as to the cost of processing the waste.

Products covered by the Act on Recycling Fees are classified into several categories, for example tyres, paint, car batteries, etc., with the recycling fee amount collected within each product category being solely intended to support the expense of handling the waste originating in that category. This method prevents the transfer of costs from one product category to another and thereby ensures that the recycling fee for each product category reflects as exactly as possible the cost due to that category.

The Board of the Recycling Fund presents proposals to the Minister for the Environment on changes in recycling fee amounts as well as on the subjection of new goods to fee payment and the amount of the recycling fee for those goods. When the Board finds it necessary to subject products to a recycling fee in order to attain greater recovery, it submits a proposal on this and the fee amount to the Minister. When preparing the proposal on new products to subject to fees, the Board should show regard for government policy and obligations concerning waste.

Upon receiving a proposal from the Board of the Recycling Fund, the Minister for the Environment presents a proposal to the Minister of Finance on changing the amounts of recycling fees, imposing recycling fees, or subjecting new products to fees, as applicable. The Minister of Finance introduces bills to the Althingi on recycling fee amounts.

Products subject to the recycling fee

The recycling fee is imposed on a number of product categories.

Packaging: Includes cardboard, paper and plastic. The collection of transport packaging, i.e. corrugated cardboard and plastic film, starts on 1 April 2005, and the collection of sales packaging on 1 March 2006. A packaging collection system will be organised for such packaging in the same manner as previously occurred for tyres and plastic hay bale wrap.

(A recycling fee will be placed on single-use drink containers at the latest by 1 January 2008, regardless of whether they are made of metal, glass, plastic or laminated paperboard. Until then, a return fee programme applies to single-use drink containers made of metal, glass or plastic but not to laminated paperboard containers, which are most common for milk products.

Plastic hay bale wrap: Accumulates in considerable quantities among Icelandic farmers. A collection programme has been organised for farmers to maximise the return rate to waste recovery.

Tyres: Some 5,000-6,000 tonnes of tyres are imported to Iceland each year. A specific collection programme has been organised to ensure their collection and recovery or disposal.

Vehicles: A recycling fee is levied on every vehicle, for a maximum of fifteen years. When the vehicle is scrapped and turned in at a collection point, the owner has the right to a return fee, in the amount of ISK 15,000, although vehicles registered before 1980 do not fall under this programme.

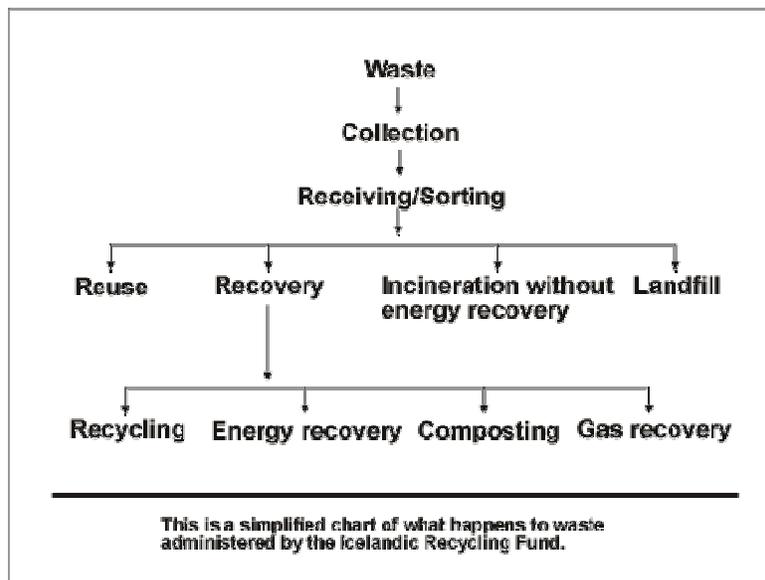
Hazardous substances: Many types of goods and substances are subject to a recycling fee, including refrigerants, chlorinated compounds, mercury products, organic solvents, photographic materials, paints, pigments, petroleum products, and car and other batteries. Hazardous substances are estimated to comprise about 4% of all waste, with the greatest accumulation of waste oil, vehicle batteries, developing chemicals and leftover oil-based paints.

Fishing gear made of synthetics: Due to Iceland's large fleet of fishing ships, a great quantity of fishing gear is discarded. As of 1 September 2005, a recycling fee will be imposed on fishing gear made of synthetics, unless prior to then the interested parties have agreed on their own collection programme.

Electrical and electronic waste: The most recent addition is that manufacturers and importers of electrical and electronic equipment are now responsible for the collection and management of such equipment after use.

Measures for waste

Heavy emphasis is placed on the minimum creation of waste. For the waste that does occur, the Icelandic Recycling Fund seeks to ensure that as much as possible enters into reuse or, as second option, into recovery, and as little as possible into landfill. The means that the Recycling Fund is to arrange economic conditions in such a fashion that most parties see materials recovery rather than landfill as being to their advantage.



Procedures in dealing with waste

The recycling fee is used to pay for handling sorted waste at the collection points and for transporting, recovering, recycling or disposing of it, with or without a return fee. It is based on a system of collection points and central waste accumulation points, some of which are run by the local authority. Individual tasks are agreed with contractors on the basis of tenders and project contracts.

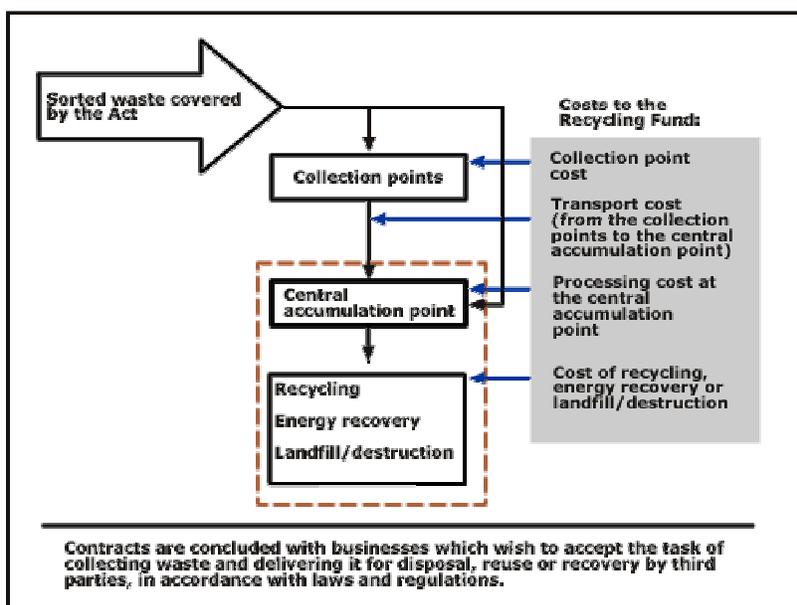
A collection point is a site or facility where waste from the public and/or smaller businesses is accepted. The waste goes from there to reuse or recovery, or is transferred to central accumulation points.

A central accumulation point is a site or facility where waste is accepted and stored for varying periods of time, until being reshipped, sorted or handled in some other way. The waste is then transferred for disposal, reuse or recovery, or is disposed of on site.

The Board of the Recycling Fund decides how waste collection and disposal are to be conducted. Contracts are then concluded with businesses that wish to accept the task of collecting waste and delivering it for disposal, reuse or recovery by third parties, in accordance with laws and regulations.

Terms are issued for those desiring to take on responsibility for collecting waste and delivering it for disposal, and a list of rates is determined by which such firms will be paid. Also, the country is divided into geographical service areas, although there is nothing to prevent a firm from serving a number of areas nor more than one firm from executing this service in the same area.

According to an agreement with the Fund, no payment is made from the Recycling Fund to those collecting waste unless a recognised party accepting the waste for recovery, reuse or disposal confirms its acceptance.



Sustainable Production and Consumption

Iceland has deliberately been making a progress towards integrating aspects of sustainable consumption and production (SCP) into policies and practice throughout the society. It is an explicit aim of the Icelandic government to advance development of SCP in the coming years. The Icelandic government uses a range of policy instruments to advance SCP, both educational, regulations and incentives, as the capacity of relevant national authorities and agencies.

Iceland considers success in SCP to be a multi-level, multi-stakeholder exercise. To facilitate SCP, it is therefore an aim to seek cross-sectoral collaboration within the public administration, as with the private/corporate sector, academia and civil society.

The Icelandic government has been facilitating SCP policies at both levels of the Icelandic public administration. At the national government level, SCP issues are nested in the Iceland's National Strategy for Sustainable Development, *Welfare for the future 2002-2020*. At the municipal local government level, SCP issues have been facilitated by the *Local Agenda 21* initiative, a joint venture between the Ministry for the Environment and the municipal local authorities. Therefore, to get a holistic overview of the SCP issues in Iceland, it is necessary to take in consideration efforts beyond the auspices of the central government.

Green public procurement

The Icelandic government's policy on *Green Public Procurement* (GPP) became effective in 2009. The overall objective of the policy is to promote environmental protection and advance sustainable development in the society. The policy was developed in collaboration with two of the largest municipal local governments, Reykjavik and Hafnarfjordur. The specific aims of this policy are to ingrate environmental considerations at all levels of public procurement programs both products, services and work. It further has the explicit aim to serve as a best practice guidelines and facilitate environmental considerations into all aspects of procurement in Iceland, beyond the public sector. It encourages both levels of public administration to adopt GPP, both the governmental level as well as the municipal local government sector. The government aims to support the implementation of this policy by increasing information and advisory services to procurers, buyers and sellers. This has been facilitated by developing a web based toolkit - www.vinn.is - that disseminates relevant information to stakeholders.

INSTRUMENTS FOR SUSTAINABLE CONSUMPTION AND PRODUCTION

Eco-labeling

The Icelandic government considers eco-labeling to be an effective and efficient instrument to facilitate sustainable consumption and production.

The Icelandic government actively participates in administration of the *Swan* eco-label. The Swan eco-label is jointly owned by the Nordic countries (Denmark, Norway, Sweden, Finland, and Iceland) and run jointly under the regional cooperative mechanisms. The Swan label is among the strongest co-brands in the Nordic region, widely reckoned by producers and consumers as a reliable brand of sound environmental delivery of a wide range of goods and services. The Icelandic government has strengthened its capacity of the Swan administration, aiming to triple at least the number Swan-labeled Icelandic enterprises. There are further intentions to seek stronger integration between the Swan eco-labeling and GPP, where the aim is to strengthen and advance both instruments.

Iceland has been a leading agent in developing a new vision for the Swan into the year 2015, a policy that is supposed to guide and advance the label in coming years.

Iceland is further enrolled in the European Union eco-label, the *Flower*, under the commitments of the European Economic Area agreement between Iceland and the EU. Icelandic enterprises can qualify and adopt the *Flower* – eco label. These two government run eco-labels, *Swan* and the *Flower*, are administrated by the Environmental Agency - www.ust.is -, the Icelandic government environmental body.

There are other sector-specific international eco-labels that have gained momentum in Iceland. The *Green flag* is an eco-label available for educational institutions; kindergartens, primary and secondary schools and colleges. The number of educational institutions qualifying for the Green flag has been

rapidly increasing. The *Blue flag* is a similar eco-label available for harbors. Both these eco-labels are administrated by the civil society organization Landvernd (The Icelandic Environmental Association). The *Green globe* eco-label is available for tourist facilities and communities. There has been commendable trial by the municipal local governments in rural communities in the *Snæfellsnes peninsula* to adopt the Green globe criteria and qualify for the label. This pioneering work can be considered as a role model for other small local governments to qualify for the community eco-label. Further, some tourist facilities have qualified for the Green globe, especially those providing accommodation.

Awareness raising

Raising awareness among the general public is important for progress in SCP, guiding and facilitating people's behavior towards more environmentally friendly, sustainable choices.

The most prominent awareness raising program has been the GAP (Global Action Programme), "vistvernd í verki" that has been active in promoting sustainable consumption at household level, encouraging citizens country-wide towards sustainable lifestyles. The project is initiated by and a responsibility of the civil society, the Icelandic Environmental association, focusing on education and capacity building, establishing eco-groups where households can share experiences. Associated with the project, in a joint venture with the Ministry for the Environment, there was a major awareness raising program in the year 2008 called *Step-by-Step*. It was pursued by a complete and comprehensive booklet, guiding households towards sustainable consumption, including transport, recycling, waste, eco-labels and energy. The publication is available on www.environment.is

The municipal authorities in Reykjavik, the capital of Iceland, that encompasses around 1/3 of the national population, have actively been running the awareness raising program – *Green steps* - that encourages the inhabitants to seek more sustainable practices, including public transport, recycling and waste treatment.

Corporate good environmental practice and responsibility

The Icelandic government encourages enterprises in general to adopt good environmental practices. The Icelandic government Environmental agency has actively participated in the development of Best Available Technology environmental criteria for different sectors (*BAT*). The *BAT* criteria have been developed and published jointly among the Nordic countries and encompass a wide range of sectors including auto repair shops, car washing facilities, waste from fishing vessels, iron industries, boating, fish breeding, dairy industries, slaughterhouses, ship yards, printing industry and fish processing. The *BAT* reports have proven to be a good tools and sources of inspiration for giving a common overview between the environmental authorities and enterprises, facilitating sustainable production of goods and services.