

I choose green
WHAT TO CHOOSE?
The guide for right consumption

Choose smart

Consumption today

Through the whole history of mankind we have been seeking for better and more comfortable life, however we should take into consideration the price of comfortableness and who pays for it. While buying cheaper, less lasting thing we don't think about irreversibly endangered plant, animal in tropical forests, degrading soil, exploitation of children and treating them as cheap labour. Actually we haven't become happier while consumption more. The statistics show that during the last 50 years residents of economically strong countries haven't become happier even all economic indexes and consumption have risen more than three times. Marketing and public relations campaigns try to convince us that buying more makes our life better and happier. Is that true?

Do we think why we buy one or another product? What criteria and information do we use to motivate our choice? Is the product useful and comfortable for us? Does it really help to conserve natural resources and strengthen country's economy, keep the environment clean and our health safe? Almost everyone knows that paper decomposes in 2 years, can - in 100 years. The oldest glass breakage found was produced 3000 years ago. Plastic may need up to 1000 years to be decomposed. Moreover, every European produces about 500 kg of waste per year, to dispose which becomes more and more expensive. So, let's look at our cart as our health and the quality of environment depend on our choice.

Green consumption means choosing and purchasing products and services not only according to the price and quality, but also to the impact of product's production and usage to the environment. Environmentally friendly products have following characteristics:

- they are produced using less natural resources, and the environment is less polluted;
- renewable, environmentally friendly sources of energy are used to produce them;
- they have smaller amount or have no hazardous, toxic substances at all;
- they don't pollute the environment;
- they are not dangerous for our health;
- they can be used many times;
- when such products become waste, they can be easily recycled or reused.

If you would like to be environment friendly consumer, you need to follow these attitudes and choose products and services having the least effect to both our environment and health.

This publication provides you with recommendations on choosing products and services. First we need to pay attention to the labels of the products.

Labelling

Labels are very important, because consumers have right to know about the products they buy. When labels are transparent, controllable and straightforward, consumers can make conscious decisions about the products they choose, and producers can choose what type of product they should produce.

Eco-labels are consumer information tools providing information related to the environmental characteristics of products and thus allowing consumers to compare the environmental performance between products of the same type. They allow consumers to choose those products which have been recognized as less harmful to the environment. Eco-labels are voluntary schemes based on specific environmental criteria. They are open to all businesses and awarded in a non-discriminatory manner.

There are more than 35 different eco-labelling systems in the world. Not all of them are important, since not all of the labelling systems are regulated strictly and different criteria of certificating are applied. The most reliable multi-criteria eco-labels in Europe are the Scandinavian label Nordic Swan and national labels like the German Blue Angel.

The oldest environmental label in the world is **the Blue Angel**. It was created in 1978 in Germany. In 2007 about 3,700 products and services in 80 product categories bore the Blue Angel.



The Swan is the official Nordic eco-label, introduced in 1989. The Swan logo demonstrates that a product is a good environmental choice. The green symbol is available for around 60 product groups for which it is felt that eco-labelling is needed and will be beneficial. These days, everything from washing-up liquid to furniture and hotels can carry the Swan label.



The EU eco-label **Flower** was created in 1992. Since then environmentally friendly products (excluding food products and fruits) have been labelled. Since year 2000 services (eg. tourism services) have been labelled the "Flower" too. Twenty-four different product groups and more than 250 licences were awarded for several hundred products in 2007¹.



CE mark means that the product satisfies the EU requirements of safety.



A "biodegradable" product has the ability to break down, safely and relatively quickly, by biological means, into the raw materials of nature and disappear into the environment.



¹ <http://www.eco-label.com/default.htm>

The label **the Rabbit** means that this product has not been tested on animals.



If 5 % of goods in the EU market were eco-labelled, during the period of one year:

- The amount of saved electricity would be equal to the amount of electricity used by 3,5 million houses in Europe;
- 12 000 milliards litres of water wouldn't be polluted;
- CO2 amount would be reduced to the amount that more than million Europeans exhale;
- The discharge of 17 500 tons of hazardous substances would be avoided.²

Food

European households spend about 13 % of their average household expenditure on food. In Europe, today, we are fortunate. In the space of a generation, our diets have become more varied and diverse, with ingredients and dishes from all over the continent and the world. Has the food however on our plates become safer with high-tech quality control tools complementing European and national legislation?

Safe food is food that is free of contaminants. Understanding the health risks of chemical pollutants in food is a complex, multidisciplinary task, and European research in this important field is currently fragmented. In 2002 Swedish researchers found carcinogen, called acrylamide, in some prepared food, including chips and other crackers. Endocrine disrupting chemicals affect hormone receptors in the cell nucleus and can have serious effects on physical development and health (for example, that of brain or reproductive functions)³. The last two decades the genetic manipulations have become very popular. GMO (Genetically Modified Organisms) danger hasn't been proved yet, however, the side effects haven't been thoroughly investigated either.

Genetically modified food is food that contains GMO. An organism is "genetically modified", if it's genetic material has been changed in a way that does not occur under natural conditions through cross-breeding or natural recombination. For example, if you cross-breed strawberry with fish gene,

² http://ec.europa.eu/environment/ecolabel/pdf/market_study/benefitsfinalreport_1104.pdf

³ http://ec.europa.eu/research/leaflets/food_safety/article_2751_lt.html

you get strawberry which can stay longer fresh in low temperature. Such condition doesn't occur naturally.

Regardless strict requirements, worldwide cultivation of genetically modified (GM) crops increased by 13 % in 2005-2006. About 50 GM plants are approved in the USA. Nowadays the most common genetically modified plants are soybeans, cotton, rapeseed, maize. Other popular GM plants are rice, potatoes, aubergines, bananas, oranges, decaffeinated coffee, etc.

It has been noticed already that genetically modified foods can cause allergic reactions to previous non-allergic food or immunity to antibiotics. Moreover, unexpected features can occur because of genetic recombination. You shouldn't forget that GMO creates danger for biodiversity, economic and social welfare.

In the EU Products containing more than 0,9% GMO must be labelled. It is recommended to avoid food imported from the USA, Canada, Brazil, as these countries produce the largest amount of GM products. You can find more information on GMO in <http://www.gmo-compass.org>.

Food additives

A food additive is defined as "any substance not normally consumed as a food in itself and not normally used as a characteristic ingredient of food whether or not it has nutritive value, the intentional addition of which to food for a technological purpose in the manufacture, processing, preparation, treatment, packaging, transport or storage of such food results, or may be reasonably expected to result, in it or its by-products becoming directly or indirectly a component of such foods" (Council Directive 89/107/EEC). 87 % of purchased food in the world (according to the quantity of money spent on it) today contains at least one food additive giving artificial flavour. Approximately 1000 food additives are known nowadays. 380 of them are allowed in Lithuania.

The producer must provide the information in the label about all used additives in food.

If the concentration level doesn't exceed the norm, the additives shouldn't make harm for health. However, the opposite opinion exists. New investigations provide more and more data. There has been much public concern that additives cause adverse reactions - allergic reactions, eczema, hives, rheum, asthma, peptic disorders, sickness, pancreas and kidney diseases, hypersensitivity to some medicaments (like aspirin), hyperactivity in children and migraines. Some of the food additives can cause mutagenic and carcinogenic effect.

Many food additives are naturally occurring and some are even essential nutrients; it is the technical purpose that leads to these being classified as food additives and given an E number.

List of food additives harmful to health⁴

Forbidden to use: E 103, E 105, E 111, E 121, E 125, E 126, E 130, E 152, E 181;

Extremely dangerous: E 123;

Dangerous: E 102, E 110, E 120, E 124, E 127;

Suspicious: E 104, E 122, E 141, E 150, E 151, E 171, E 173, E 180, E 240, E 241, E 471

May cause cancer: E 131, E 142, E 210, E 211, E 212, E 213, E 214, E 215, E 217, E 239, E 330;

Increase cholesterol level: E 320, E 321;

Increase blood pressure: E 250, E 251, E 252;

Cause skin disorders: E 232, E 233;

Cause eczema: E 311, E 312;

Kills vitamin B12: E 220;

Cause peptic disorders: E 222, E 223, E 224, E 226.

Every consumer makes his/her own decision. While choosing food products, it is necessary to examine the label carefully. The best choice is environmentally friendly products, because they are valuable, contain a lot of vitamins, have good taste and smell, are not polluted with synthetic chemical substances (such as hormones, antibiotics, pesticides, fertilizers), synthetic food additives and GMOs. Such products are produced using raw material from ecological farms. Synthetic fertilizers and pesticides are not used in ecological farms. Furthermore, ecological farms use methods of plant diversity, crop rotation, natural mineral and organic fertilizers, and natural control of weeds, diseases and pest. The safest food is ecological and grown in the same geographical region. Environmental product is always eco-labelled containing the most important information about the identified producer, his certification number and certification authority. The production of eco-products is strictly regulated according the Requirements of Ecological Agriculture. While using such products you will not harm your and your children's health and protect the environment.

Certified Lithuanian eco-farmers and processors have been using label “**Ecological farming**” (in Lithuanian “Ekologinis žemės ūkis“) together with eco-label “Ekoagros” since 2006.



⁴ <http://www.imunitetas.lt/?aid=351&mgid=3>

Household chemicals

It is estimated that the usage of toxic chemical substances is ten times bigger in household than in farming (0,4 ha equivalent). Intoxications in household comprise 10 % of total registered intoxications.

Laundry detergents

Every detergent contains different chemical substances, which help washing. Such substances are surface-active agents, phosphates, chlorine, hydrogen peroxide, carbonate, ferments, enzymes, fabric softeners, optical bleaches, perfume fragrances, colour pigments, etc. These substances however can have negative effect on our health and environment.

Some substances (dyes, chlorine compounds, perfume fragrances, optical bleaches, and fabric softeners) can cause allergic reaction. Not enough rinsed-out laundry may be the reason of skin and mucous membrane irritation. Such substances as EDTA, NTA, chlorine compounds, perfume fragrances, softeners can be the reasons of cancerous diseases, can harm reproduction. There are substances causing cancerous diseases, damaging lungs, brains, and nervous system in softeners.

Laundry detergents containing phosphates and chlorine compounds are extremely dangerous for environment. Because of great amount of phosphates in sewage there is a huge effect on the growth of algae in water and negative impact on the aquatic environment - the amount of oxygen is reduced, etc.

Chlorine compounds are durable and can stay in the environment for a long time, accumulate in fatty tissues of live organisms, penetrate into person's body, and can be transferred to future generations through placenta and mother's milk. They can have negative effect on reproduction, be the reason of infertility, weaken immunity, damage the internal organs, and cause cancerous diseases.

Cleaning products

Cleaning products are comprised of about 10-20 different chemicals and their compounds. Surface active agents, acids, alkalis, fragrant and disinfecting substances help cleaning and disinfecting different surfaces.

Surface active agents are harmful for the environment and can cause disbalance of hormones. Cleaning products contain phosphates too, which cause water eutrophication. Many bleaches and cleaners contain numerous chlorine compounds that are toxic for water organisms, negatively affect human's health - may produce irritation and other significant health effects, such as intoxication.

Most of the substances (chlorine compounds, some of surface active agents, fragrant and disinfecting substances) are not biodegradable, concentrate in nourishment chain and get into human body.

Volatile organic compounds that are often found in cleaners vaporize from cleaning surface and contaminate air, which can cause nausea, headache, faint, asthma.

Air fresheners

Aerosols, fragrant soaps, sheets, candles, incenses, electric scents not only freshen air, but also contaminate it. Mostly air fresheners are to absorb, chemically neutralize, and eliminate odour or to neutralize odour receptors. Using air fresheners, we smell the ingredients - volatile organic compounds. 95 % of these compounds have synthetic organic origin and are produced from petroleum. They can cause central nervous system damages, cancerous and congenital diseases, allergic and asthma reactions, bronchitis.

Cosmetics and personal care products

Thousands of various chemicals are used in cosmetic and personal care products. The average amount of cosmetic and personal care products daily used by person is 20-25. These products contain round 200 chemicals. The impact for man and environment of almost 90 % of chemicals used in cosmetic and personal hygiene products hasn't been investigated yet.

Soaps, toothpastes, mouthwashes, deodorants, intimate hygiene products, cosmetic napkins often contain anti-bacterial agents. These agents cause increase of immunity to certain medicine (antibiotics). Anti-bacterial products can be the reason of weak immunity. Triclosane is one of the most common anti-bacterial agents. Triclosane has negative impact on human body (can cause developmental disorders, cancer diseases) and pollutes water as well.

Some nail polishes, lipsticks, fragrances, deodorants, and hair and body products contain dibutyl phthalate, or DBP, a chemical linked to cancer in animals. DBP makes harm to liver, weakens

immunity system, disorders metabolism, increases risk for asthma in children, affects negatively male reproduction system.

95 % of perfume fragrances used in cosmetic products is synthetic, made from petroleum. The most hazardous are musk compounds. Such compounds can damage liver, kidneys, nervous system, and cause cancer diseases.

Parabens are a group of chemicals widely used as preservatives in cosmetics (deodorants, creams, shampoos, conditioners). Parabens can easily penetrate skin, and acting similar as estrogens, cause destructive impact on endocrine system. They can cause different allergies as well.

Other chemicals commonly found in cosmetics include p-fenylendiamin, propylene glycol, toluene, formaldehyde and xylene can cause allergic reactions, increase risk urinary bladder cancer disease risk, increase abortion risk, cause congenital malformations (e.g. skeletal and ocular defects, defects of nerves in embryo), various skin disorders, and liver diseases. Sodium laurilsulphate found in shampoos, toothpastes, shower gels can negatively affect breath, immunity systems, even can cause infertility.

Toys and other children's products

Children are extremely sensitive and vulnerable to chemicals, therefore it is important to ensure that children's toys and other products are safe. Pigments, colours, inflammability reducing agents, softeners, antioxidants, stabilizers, and solvents are used to make toys nice, colourful, attractive and resistant. These agents, however, can have negative effect on child's system.

Hazardous phthalates ("plasticizers") are used in soft plastic toys. They are not compound with plastic; therefore they can easily penetrate environment and human system. Phthalates can cause cancer diseases, damage internal system, negatively affect the development of sexual organs. They can be found in dark glowing toys, modeling clay.

Toys, filled with decorative liquid, dyes and glues may contain mineral oil and solvents. These agents penetrate child's body and can cause pneumonia, irritate skin and breathing system.

Drawing and modeling products may contain hazardous pigments and preservatives. Preservatives can cause different allergies.

About 1000 various chemicals are used in electronic products. The most hazardous are inflammability reducing agents, mercury, plumbum, cadmium, and lithium, used in batteries. These chemicals can damage hormone system, cause cancer diseases, retard development.

You can become environment friendly and responsible user as well!

- **Buy smart.**
 - ✓ Take some time to think before you buy something – maybe you don't really need it. You can always think of an alternative to buying a product, such as renting a DVD instead of buying it or sending an e-card instead of paper greeting card.
 - ✓ Think of how much of food you put into trash can because you buy too much or don't have enough time to eat it. Only in Great Britain every person throws away 2250 litres of food every year.
- **Pay attention to package.**
 - ✓ Plastic bags have been used hardly for 50 years. Every year we use more than trillion of them. The impact for the environment of this type of waste is huge. Every year more than 100000 birds, sea turtles, whales, seals die because of our daily plastic bags. And how much of them get seriously sick?!
 - ✓ None of the scientists can say the real degradation time of these products. Plastic bags are not readily biodegradable and it is supposed that they degrade in 500-1000 years.
 - ✓ Looking for alternatives, it is planned to forbid plastic bags made from petroleum starting September, 2007 in San Francisco, USA. Retailers will be obliged to use bags made from bioplastics (corn starch) or from easily recyclable paper.
 - ✓ Various packages comprise $\frac{1}{3}$ of our waste weight and moreover $\frac{1}{2}$ of container's volume. You can buy less or unpacked items. This way you will avoid excess of packages. If you are buying bananas, for example, you don't need to put it into plastic bag – you can put directly into your shopping bag.
 - ✓ Buy durable multiple use shopping bags and take them from home when you are going to shop. It is supposed that the quantity of onetime plastic bags could be reduced by introducing charges for them in shopping centers.
 - ✓ Fabric bags are fashionable again! Fighting against harmful consumerism designers introduce in their collections various fabric bags with environmental slogans.

- **Buy durable products.**
 - ✓ Instead of buying disposable products, which are wasteful, buy things that will last a long time, such as rechargeable batteries and reusable plastic mugs for drinks.
- **Buy used.**
 - ✓ Buying things that have been used before means that your purchase doesn't use more resources or energy. If the item is still reusable when you are through with it, then the next person to use it is not using additional resources either. To save money is fashionable. You can find authentic clothes, room accessories, books, used CDs, and even sports equipment at your local second-hand shop.
 - ✓ You can bring your used but still reusable items to charity shops, where they will find a new owner.
- **Share with your friends.**
 - ✓ Maybe you and your friends like the same video games, books.
- **Buy energy-efficient items.**
 - ✓ Look for ENERGY STAR® logo when buying electronics, such as TVs, CD players, DVD players and computers.
- **Buy recycled items.**
 - ✓ Buying items made from secondary raw materials means that fewer natural resources were used to produce the products. Products made from recycled paper, plastic, glass and metal are usually labelled.
 - ✓ Producing glass from breakages consumption of energy is reduced by 25 %, air pollution by 20 % and water pollution by 50 %.
 - ✓ Producing items from recycled plastic 2/3 of used energy is reduced to compare with producing from primary stock – petroleum and natural gas.
 - ✓ Bring bottles, newspapers, cans for recycling. Recycling of 1 kg of used aluminum cans uses ten times less energy than new production.
- **Choose healthy food.**
 - ✓ Healthy food is fresher and more delicious, contains more nutrients;
 - ✓ It is cleaner (the minimum amount of ecological nutrients in ecological product is 95 %);

- ✓ It doesn't contain synthetic food additives, such as preservatives, emulsions, colourants, and sweeteners.
 - ✓ It supports regional and local economy (we can buy the same and often of a higher quality Lithuanian instead of imported product);
 - ✓ It saves non-renewable energy resources (the fuel for bringing food from another countries is saved);
 - ✓ Healthy food contributes to environment protection (biodiversity is saved, the soil erosion is reduced, the soil and water pollution with chemicals is reduced too).
- The amount of phosphates in laundry detergents and cleaners shouldn't exceed 5 %;
 - Avoid cleaners and laundry detergents with chlorine, synthetic perfumes and colourants;
 - Avoid fabric softeners and antibacterial products;
 - You can always use alternative cleaners – salt, soda or vinegar;
 - Prefer products containing natural scents;
 - Eliminate smell using natural products, such as soda, vinegar, dry blossom leaves, etc;
 - Open windows more often and clear the air;
 - Avoid antibacterial cosmetic and personal care products. Ordinary soap is just a little bit less effective.
 - Use cosmetic and personal care products only when you need it;
 - Avoid cosmetic products containing synthetic scents, colourants and antibacterial substances;
 - Choose products made from natural materials;
 - Instead of soft plastic toys give your child wooden toy. Wooden toys should be not patent-leather and painted.
 - Prefer acrylic paint, buy water-based glue;
 - Play with natural clay;
 - Try to avoid toys with batteries, otherwise make sure that the cover of batteries is safely screwed.
 - **Buy nothing!**

Every year at the end of November Buy Nothing Day exposes the environmental and ethical consequences of consumerism. On this day everybody is invited to stop for a while

and think about our never-ending purchasing. Does it make our lives happier? We are not going to change the world while not purchasing one day. It is the day of reflection – “How many items do I need?” “Do I work only in order to have more room for my items?”

LITERATURE

Let's Go Green Shopping. 2004. United States Environmental Protection Agency. Washington. 10 p.
[http://www.lpf.lt/learning/environmentally_friendly_materials_and_chemicals LT.doc+bioplastikai&hl=lt&ct=clnk&cd=5&gl=lt](http://www.lpf.lt/learning/environmentally_friendly_materials_and_chemicals_LT.doc+bioplastikai&hl=lt&ct=clnk&cd=5&gl=lt)
<http://www.apicentras.lt/?pid=204>
http://www.bef.lt/chemines_medziagos/cheminis_kokteilis.php?
http://www.ibuydifferent.org/takeaction/paper_quickfacts.asp
<http://www.imunitetas.lt/?mgid=3&aid=342>
<http://www.lrytas.lt> (Bončkutė M. 2007-07-24 *Myli gamtą? Nenaudok plastikinio maišelio*, str. Lietuvos Ryte)
<http://www.nottoopretty.org> (DiGangi J, Norin H. 2002. *Pretty Nasty – Phthalates in European Cosmetic Products.*)
<http://www.sveikasmogus.lt/index.php?pagrid=mityba&lid=2&rodyti=str&strid=36121&subtema=46>
<http://tekstile.lti.lt/tekstile/documents/gpgb2.pdf>
<http://www.vartotojai.lt/lt/13/pbl207.html>
<http://www.worldwatch.org> (2004 Worldwatch Institute, *Good Stuff?*)
"Money not the root of all happiness," *The Christian Science Monitor*, David Francis, December 15, 1997.
http://ec.europa.eu/research/leaflets/food_safety/article_2751_lt.html
<http://www.blauer-engel.de/>
<http://www.eco-labels.org>

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